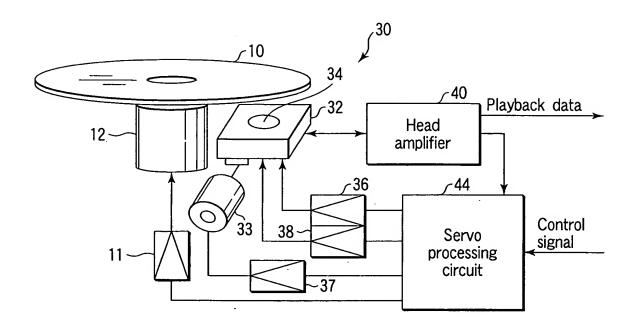
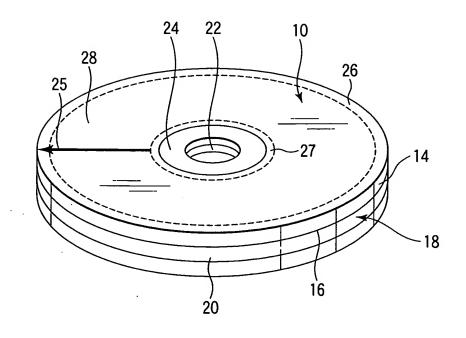


F1 G. 1

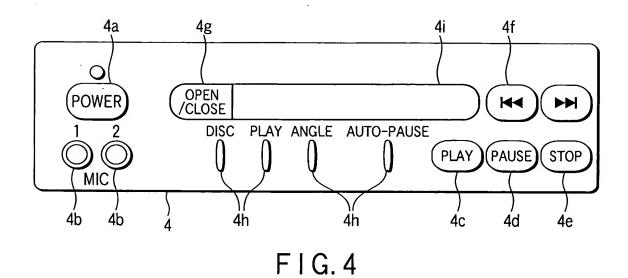


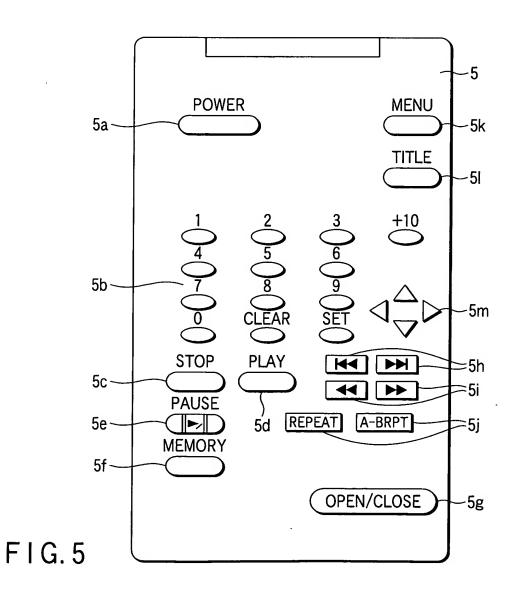
F1G.2

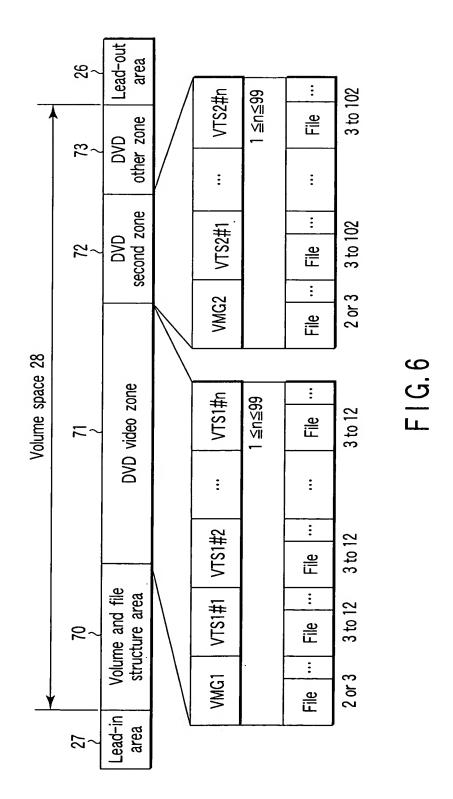


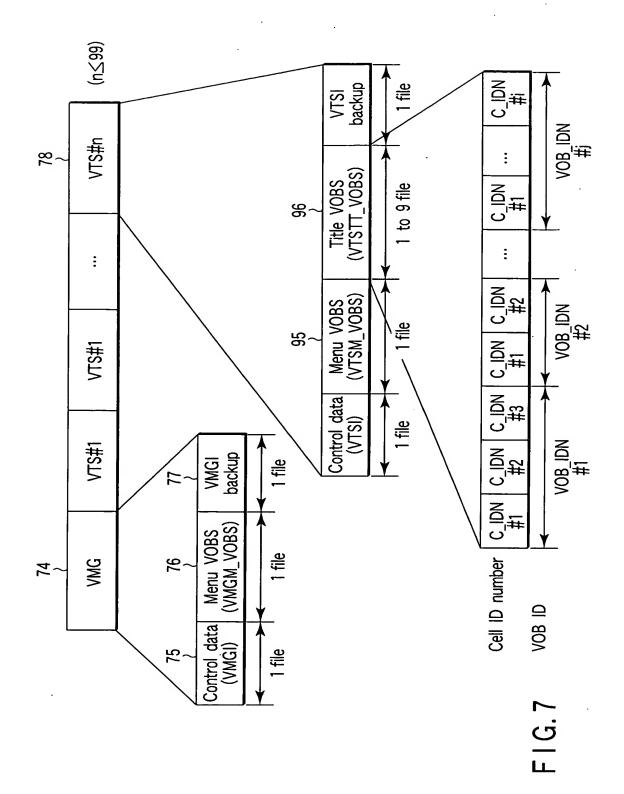
F I G. 3

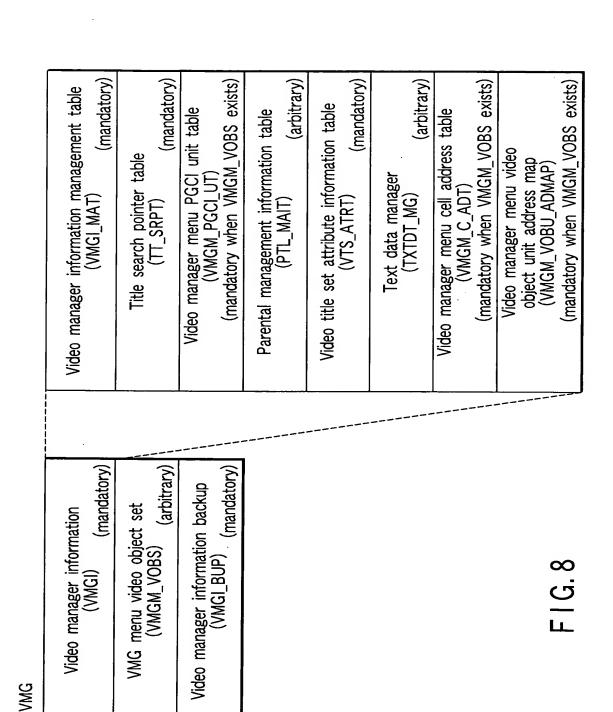
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75~

76~

77~

S2 Nideo object (VOB_IDN1) Video object (VOB_IDN2) .				1	7		7		7	
S2 S2 S2 S2 S2 S2 S2 S2				(ÎNC				nit nit		A pack
S2 S2 S2 S2 S2 S2 S2 S2				NOB_I[ON.)		bject u OBU)		:
S2 S2 S2 S2 S2 S2 S2 S2			'	bject ([C]		/ideo o		:
S2				/ideo o		Ö				÷
S2										NV pack
83										back
82										A pack
82		<u> </u>		:		:				opack
83		(VOB						unit		SP pack
83		ject ser			1		1	object (VOBU)		A pack
83		ideo obi		IDN2)		_		Video		:
83 84 84 85 85 85 86 87 88 90 90 90 90 90 90 90		>		t (VOB		C_IDN2)				÷
83 84 84 85 85 85 86 87 88 90 90 90 90 90 90 90				object		Cell (C		t unit		:
83 84 84 85 Cell (C_IDN1) 85 85 86 00 object unit (VOBU) 88 8 00 v v v v v v v v v v v v v v v v v v				Video	j			o objec (VOBL	6~	A pack
83 83 84 84 84 85 85 85 86 89 88 88 88 88 88 88 88 88 88 88 88 88								Vide	8~	SP pack
83 83 84 84 84 85 85 88 88 88 88 88 88 88 88 88 88 88				B_IDN1		<u></u>				pack <
Video obje Video	~85		83	ct (VO	% ~	(C_IDN	. ₩~	oct unit U)	& ~	opack
Vid Vid Vid Vid				eo obje		Cell		leo obje (VOB		opack
				Vid				Ķ	% ~	NV pack

F 1 G. 9

	Program chain #j		Program #k		Cell ID #n
	Pro		:		Ξ
	:		Program #3		Cell ID #5
	[# u		Program #2		Cell ID #2
87	Program chain #1	68 ~	Program #1	84~	Cell ID #1

F | G. 10

_VMGI_MA	Γ	_	(Description) order
RBP		Contents	Number of bytes
0 to 11	VMG_ID .	VMG Identifier	12 bytes
12 to 15	VMG_EA	End address of VMG	4 bytes
16 to 27	reserved	reserved	12 bytes
28 to 31	VMGI_EA	End address of VMGI	4 bytes
32 to 33	VERN	Version number of DVD Video Specifications	2 bytes
34 to 37	VMG_CAT	Video Manager Category	4 bytes
38 to 45	VLMS_ID	Volume Set Identifier	8 bytes
46 to 61	reserved	reserved	16 bytes
62 to 63	VTS_Ns	Number of Video Title Sets	2 bytes
64 to 95	PVR_ID	Provider unique ID	32 bytes
96 to 103	POS_CD	POS Code	8 bytes
104 to 127	reserved	reserved	24 bytes
128 to 131	VMGI_MAT_EA	End address of VMGI_MAT	4 bytes
132 to 135	FP_PGCI_SA	Start address of FP_PGCI	4 bytes
136 to 191	reserved	reserved	56 bytes
192 to 195	VMGM_VOBS_SA	Start address of VMGM_VOBS	4 bytes
196 to 199	TT_SRPT_SA	Start address of TT_SRPT	4 bytes
200 to 203	VMGM_PGCI_UT_SA	Start address of VMGM_PGCI_UT	4 bytes
204 to 207	PTL_MAIT_SA	Start address of PTL_MAIT	4 bytes
208 to 211	VTS_ATRT_SA	Start address of VTS_ATRT	4 bytes
212 to 215	TXTDT_MG_SA	Start address of TXTDT_MG	4 bytes
216 to 219	VMGM_C_ADT_SA	Start address of VMGM_C_ADT	4 bytes
220 to 223	VMGM_VOBU_ADMAP_SA	Start address of VMGM_VOBU_ADMAP	4 bytes
224 to 255	reserved	reserved	32 bytes
256 to 257	VMGM_V_ATR	Video attribute of VMGM	2 bytes
258 to 259	VMGM_AST_Ns	Number of Audio streams of VMGM	2 bytes
260 to 267	VMGM_AST_ATR	Audio stream attribute of VMGM	8 bytes
268 to 323	reserved	reserved	56 bytes
324 to 339	reserved	reserved	16 bytes
340 to 341	VMGM_SPST_Ns	Number of Sub-picture streams of VMGM	2 bytes
342 to 347	VMGM_SPST_ATR	Sub-picture stream attribute of VMGM	6 bytes
348 to 1023	reserved	reserved	676 bytes
1024 to 2291 (max.)	FP_PGCI	First Play PCCI	0 or (236 to 1268) bytes

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VERN

b15	b14	b13	b12	b11	b10	b9	b8	
reserved								
b7	b6	b5	b4	b3	b2	b1	b0	
Book Part version								

F I G. 12

VMG_CAT

b31	<u>b</u> 30	b29	b28	b27	b26	b25	b24
			rese	rved			"
b23	b22	b21	b20	b19	b18	b17	b16
RMA#8	RMA#7	RMA#6	RMA#5	RMA#4	RMA#3	RMA#2	RMA#1
b15	b14	b13	b12	b11	b10	b9	b8
rese	rved			rese	rved		
b7	b6	b5	b4	b3	b2	b1	b0
	reserved						

FIG. 13

VMGM_V_ATR

b15	b14	b13	b12	b11	b10	b9	b8
	mpression ode	TV s	ystem	Aspect	ratio	Display	mode
b7	b6	b5	b4	b3	b2	b1	b0
line21_ switch_1	line21_ switch_2	Source	picture r	resolution)	reser	ved

Source picture letterboxed

FIG. 14

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VMGM_SI	PST_Ns						
<u>b15</u>	b14	b13	b12	b11	b10	b9	b8
	reserved						
b7	b6	b5	b4	b3	b2	b1	b0
reserved			Numb	er of sub-	-picture st	reams	

F I G. 15

VMGM_S	PST_ATR						
b47	b46	b45	b44	b43	b42	b41	b40
Sub-pic	ture codin	g mode		reserved		rese	rved
b39	b38	b37	b36	b35	b34	b33	b32
			rese	rved			
b31	b30	b29	b28	b27	b26	b25	b24
	reserved						
b23	b22	b21_	b20	b19	b18	b17	b16
			rese	rved			
b15	b14	b13	b12	b11	b10	b9	b8
			rese	rved			
b7	b6	b5	b4	b3	b2	b1	b0
			rese	rved	 		

FIG. 16

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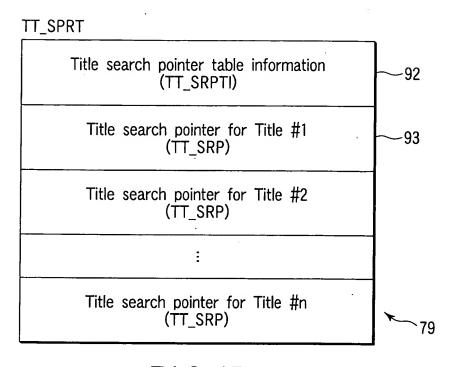


FIG. 17

TT_SRPTI		(Description order)
	Contents	
TT_Ns	Number of title search pointers	
TT_SRPT_EA	End address of TT_SRPT	

F I G. 18

TT_SRP		(Description order)
	Contents	
PTT_Ns	Number of part-of-titles	
VTSN	Video title set number	
VTS_TTN	Video title set title number	
VTS_SA	Start address of video title set	

FIG. 19

VMGM_PGCI_UT Video manager menu PGCI unit table information (VMGM_PGCI_UTI) Video manager menu language unit search pointer #1 (VMGM_LU_SRP #1) : : Video manager menu language unit search pointer #n (VMGM_LU_SRP #n) Video manager menu language unit #1 (VMGM_LU #1) : : Video manager menu language unit #1 (VMGM_LU #1) : (VMGM_LU #1)

FIG. 20

VMGM_PGCI_UTI

	Contents
VMGM_LU_Ns	Number of video manager menu language units
VMGM_PGCI_UT_EA	End address of video manager menu language unit

VMSM_LU_SRP

	Contents
VMGM_LCD	Video manager menu language code
VMGM_LU_SA	Start address of video manager menu language unit

FIG. 22

FIG. 23

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VMGM_LUI		(Description order)		
	Contents	Number of bytes		
(1) VMGM_PGCI_SRP_Ns	Number of VMGM_PGCI_SRPSs	2 bytes		
reserved	reserved	2 bytes		
(2) VMGM_LU_EA	End address of VMGM_LU	4 bytes		

F I G. 24

VMGM_PGCI_SRP		(Description order)
	Contents	Number of bytes
(1) VMGM_PGC_CATs	VMGM_PGC category	4 bytes
(2) VMGM_PGCI_SA	Start address of VMGM_PGCI	4 bytes

FIG. 25

VMGM_PG	C_CAT							
<u>b31</u>	b30	b29	b28	b27	b26	b25	b24	
Entry type		reserved		u ID				
b23	b22	b21	b20	b19	b18	b17	b16	
Block	mode	Block	k type	reserved			VOB_ VERN	
b15	b14	b13	b12	b11	b10	b9	b8	
PTL_ID_FLD (Upper bits)								
b7	b6	b5	b4	b3	b2	b1	b0	
PTL_ID_FLD (Lower bits)								

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VMGM_C_ADTI		(Description order)
	Contents	Number of bytes
(1) VMGM_VOB_Ns	Number of VOBs in VMGM_VOBS	2 bytes
reserved	reserved	2 bytes
(2) VMGM_LU_EA	End address of VMGM_LU	4 bytes

F I G. 27

VMGM_CPI		(Description order)
	Contents	Number of bytes
(1) VMGM_VOB_IDN	VOB ID number in VMGM_VOBS	2 bytes
(2) VMGM_C_IDN	Cell_ID number of VMGM_CP	1 bytes
(3) VMGM_VOB_CAT	VMGM_VOB category	1 bytes
(4) VMGM_CP_SA	Start address of VMGM_CP	4 bytes
(5) VMGM_CP_EA	End address of VMGM_CP	4 bytes

FIG. 28

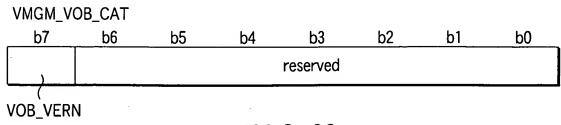


FIG. 29

Video Title Set Information (VTSI) (Mandatory)	Video Title Set Information Management Table (VTSI_MAT)
Video Object Set for Video Title Set Menu (VTSM_VOBS) (Optional)	 Video Title Set Part of Title Search Pointer Table (VTS_PTT_SRPT)
Video Object Set for Video Title Set Title (VTSTT_VOBS) (Mandatory)	 Video Title Set Program Chain Information Table (VTS_PGCIT)
Backup of Video Title Set Information (VTSL_BUP) (Mandatory)	 Video Title Set Menu PGCI Unit Table (VTSM_PGCI_UT) (Mandatory when VTSM_VOBS exists)
	 Video Title Set Time Map Table (VTS_TMAPT)
	 Video Title Set Menu Cell Address Table (VTSM_C_ADT) (Mandatory when VTSM VOBS exists)
·	 Video Title Set Menu Video Object Unit Address Map (VTSM_VOBU_ADMAP) (Mandatory when VTSM_VOBS exists)
	 Video Title Set Cell Address Table (VTS_C_ADT) (Mandatory)
F1G.30	 Video Title Set Video Object Unit Address Map (VTS_VOBU_ADMAP) (Mandatory)

VTSI_MAT			(Description) order
RBP		Contents	Number of bytes
0 to 11	VTS_ID	VTS Identifier	12 bytes
12 to 15	VTS_EA	End address of VTS	4 bytes
16 to 27	reserved	reserved	12 bytes
28 to 31	VTSI_EA	End address of VTSI	4 bytes
32 to 33	VERN	Version number of DVD Video Specification	2 bytes
34 to 37	VTS_CAT	VTS Category	4 bytes
38 to 127	reserved	reserved	90 bytes
128 to 131	VTSI_MAT_EA	End address of VTSI_MAT	4 bytes
132 to 191	reserved	reserved	60 bytes
192 to 195	VTSM_VOBS_SA	Start address of VTSM_VOBS	4 bytes
196 to 199	VTSTT_VOBS_SA	Start address of VTSTT_VOBS	4 bytes
200 to 203	VTS_PTT_SRPT_SA	Start address of VTS_PTT_SRPT	4 bytes
204 to 207	VTS_PGCIT_SA	Start address of VTS_PGCIT	4 bytes
208 to 211	VTSM_PGCI_UT_SA	Start address of VTSM_PGCI_UT	4 bytes
212 to 215	VTS_TMAPT_SA	Start address of VTS_TMAPT	4 bytes
216 to 219	VTSM_C_ADT_SA	Start address of VTSM_C_ADT	4 bytes
220 to 223	VTSM_VOBU_ADMAP_SA	Start address of VTSM_VOBU_ADMAP	4 bytes
224 to 227	VTS_C_ADT_SA	Start address of VTS_C_ADT	4 bytes
228 to 231	VTS_VOBU_ADMAP_SA	Start address of VTS_VOBU_ADMAP	4 bytes
232 to 255	reserved	reserved	24 bytes
256 to 257	VTSM_V_ATR	Video attribute of VTSM	2 bytes
258 to 259	VTSM_AST_Ns	Number of Audio streams of VTSM	2 bytes
260 to 267	VTSM_AST_ATR	Audio stream attribute of VTSM	8 bytes
268 to 323	reserved	reserved	56 bytes
324 to 339	reserved	reserved	16 bytes
340 to 341	VTSM_SPST_Ns	Number of Sub-picture streams of VTSM	2 bytes
342 to 347	VTSM_SPST_ATR	Sub-picture stream attribute of VTSM	6 bytes
348 to 511	reserved	reserved	164 bytes
512 to 513	VTS_V_ATR	Video attribute of VTS	2 bytes
514 to 515	VTS_AST_Ns	Number of Audio streams of VTS	2 bytes
516 to 579	VTS_AST_ATRT	Audio stream attribute table of VTS	64 bytes
580 to 595	reserved	reserved	16 bytes
596 to 597	VTS_SPST_Ns	Number of Sub-picture streams of VTS	2 bytes
598 to 789	VTS_SPST_ATRT	Sub-picture stream attribute table of VTS	192 bytes
790 to 791	reserved	reserved	2 bytes
792 to 983	VTS_MU_AST_ATRT	Multichannel Audio stream attribute table of VTS	192 bytes
984 to 1023	reserved	reserved	40 bytes
1024 to 2047	reserved	reserved	1024 bytes

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VERN										
b15	b14	b13	b12	b11	b10	b 9	b8			
reserved										
b7	b6	b5	b4	b3	b2	b1	b0			
	Book Part version									

FIG. 32

VTS_CAT	Ī								
b31	b30	b29	b28	b27	b26	b25	b24		
reserved									
b23	b22	b21	b20	b19	b18	b17	b16		
reserved									
b15	b14	b13	b12	b11	b10	b9	b8		
reserved									
b7	b6	b5	b4	b3	b2	b1	b0		
reserved					Applicati	on type			

FIG. 33

VTSM_V_ATR b15 b14 b13 b12 b11 b9 b10 b8 Video compression TV system Display mode Aspect ratio mode b7 b6 b5 b4 b3 b2 b1 b0 line21 line21_ Source picture resolution reserved switch_1 switch_2

FIG. 34

Source picture letterboxed

VTSM_A	ST_Ns							
<u>b15</u>	b14	b13	b12	b11	b10	b9	b8	
reserved								
-b7	b6	b5	b4	b3	b2	b1	b0	
	rese	rved		Nun	nber of a	udio stre	ams	

VTSM_SP	ST_ATR										
b47	b46	b45	b44	b43	b42	b41	b40				
Sub-pic	ture codin	g mode		reserved		rese	rved				
b39	b38	b37	b36	b35	b34	b33	b32				
	reserved										
b31	b30	b29	b28	b27	b26	b25	b24				
reserved											
b23	b22	b21	b20	b19	b18	b17	b16				
reserved											
b15	b14	b13	b12	b11	b10	b9	b8				
reserved											
b7	b6	b5	b4	b3	b2	b1	b0				
			reserved								

FIG. 36

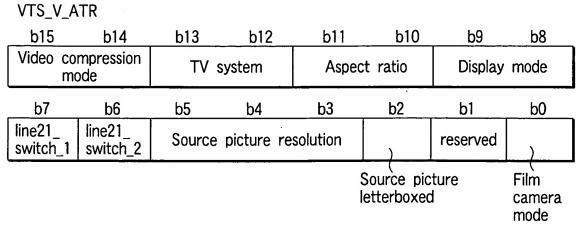


FIG. 37

Contents of audio stream attribute VTS_AST_ATR

b63	b62	b61	b60	b59	b58	b57	b56		
Au	Audio coding mode		Multi-channel extension	Audio	type	Application ID			
b55	b54	b53	b52	b51	b50	b49	b48		
Quant	ization	Sampling	frequency	reserved (O)	Number	of audio o	channels		
b47	b46	b45	b44	b43	b42	b41	b40		
			Special code (Upper bits	s)				
b39	b38	b37	b36	b35	b34	b33	b32		
	Special code (Lower bits)								
b31	b30	b29	b28	b27	b26	b25	b24		
	Reserved specific code (O)								
b23	b22	b21	b20	b19	b18	b17	b16		
			reserved	(0)					
b15	b14	b13	b12	b11	b10	b9	b8		
	reserved (O)								
b7	b6	b5	b4	b3	b2	b1	b0		
			Application in	formation					

Contents of sub-picture stream attribute VTS_SPST_ATR

				Storage r Stored_Fo		Compression/ non-compress	
b47	b46	b45	b44) b43	b42) b41	b40
Sub-p	icture codir	ng mode	reserved (O)			Sub-pict	ure type
b39	b38	b37	b36	b35	b34	b33	b32
	reserved (O)						
b31	b30	b29	b28	b27	b26	b25	b24
	·	(Special code	(Upper b	its)		
b23	b22	b21	b20	b19	b18	b17	b16
Special code (Lower bits)							
b15	b14	b13	b12	b11	b10	b9	b8
Reserved special code (O)							
b7	b6	b5	b4	b3	b2	b1	b0
			Special cod	e extensio	on		

FIG. 39

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VTS_PGCIT

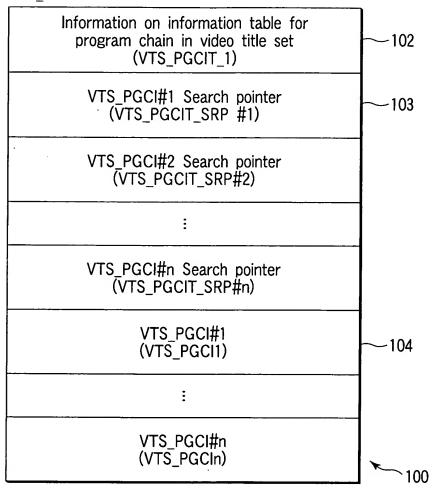


FIG. 40

VTS_PGCIT_I		(Description order)
	Contents	
VTS_PGC_Ns	Number of VTS_PGCs	
VTS_PGCIT_EA	End address of VTS_PGCIT	

F I G. 41

VTS_PGCIT_SRP	(Description order)
	Contents
VTS_PGC_CAT	VTS_PGC category
VTS_PGCI_SA	Start address of VTS_PGC information

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VTS_PGCI

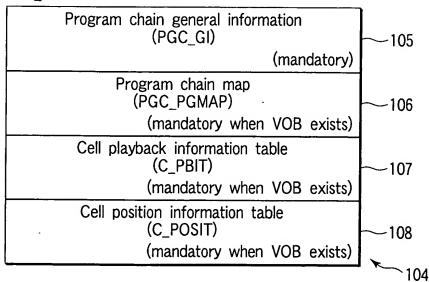
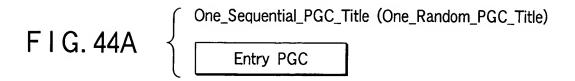
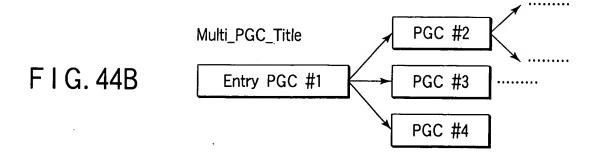
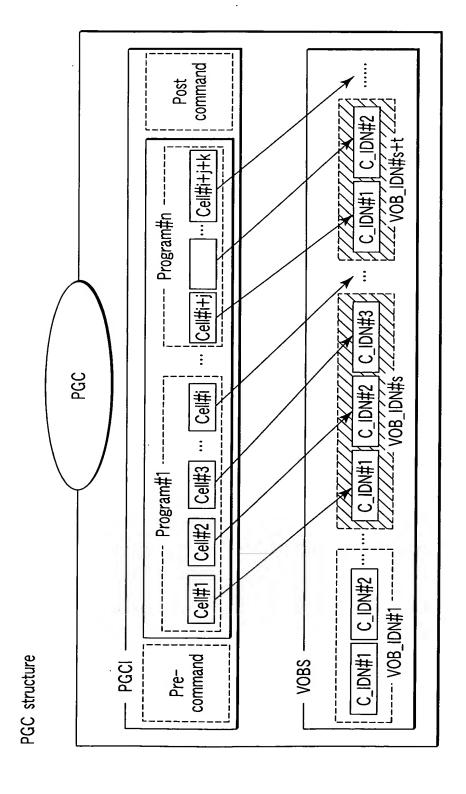


FIG. 43







F1G. 45

PGCI structure

Program chain general information (PGC_GI) (mandatory)
Program chain command table (PGC_CMDT) (arbitrary)
Program chain program map (PGC_PGMAP) (mandatory when C_PBIT exists)
Cell playback information table (C_PBIT) (mandatory)
Cell position information table (C_POSIT) (mandatory when C_PBIT exists)

FIG. 46

PGC_CN	IT								
b31	b30	b29	b28	b27	b26	b25	b24		
	reserved								
b23	b22	b21	b20	b19	b18	b17	b16		
			rese	rved					
b15	b14	b13	b12	b11	b10	b9	b8		
reserved	erved Number of programs								
b7	b6	b5	b4	b3	b2	b1	b0		
			Number	of cells					

FIG. 48

236 bytes	Total		
2 bytes	Start address of C_POSIT	(11) C_POSIT_SA	234 to 235
2 bytes	Start address of C_PBIT	(10) C_PBIT_SA	232 to 233
2 bytes	Start address of PGC_PGMAP	(9) PGC_PGMAP_SA	230 to 231
2 bytes	Start address of PGC_CMDT	(8) PGC_CMDT_SA	228 to 229
4 bytes × 16	PGC Sub-picture Palette	(7) PGC_SP_PLT	164 to 227
8 bytes	PGC Navigation Control	(6) PGC_NV_CTL	156 to 163
128 bytes	PGC Sub-picture stream Control Table	(5) PGC_SPST_CTLT	28 to 155
16 bytes	PGC Audio stream Control Table	(4) PGC_AST_CTLT	12 to 27
4 bytes	PGC User Operation Control	(3) PGC_UOP_CTL	8 to 11
4 bytes	PGC Playback Time	(2) PGC_PB_TM	4 to 7
4 bytes	PGC Contents	(1) PGC_CNT	0 to 3
Number of bytes	Contents		RBP
(Description order)			PGC_GI

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PGC_SPS	T_CTL						
b31	b30	b29	b28	b27	b26	b25	b24
Availability flag	HD-flag	reserved	Decoding	sub-picture	stream	number for	4:3/HD
b23	b22	b21	b20	b19	b18	b17	b16
	reserved					ure stream spect ratio	
b15	b14	b13	b12	b11	b10	b9	b8
	reserved		Decoding	sub-picture	stream	number for	letterbox
b7	b6	b5	b4	b3	b2	b1	b0
	reserved		Decoding	sub-picture	stream	number for	pan/scan
				` 40	 -		-

F I G. 49

PGC_SP_I	PLT						
b31	b30	b29	b28	b27	b26	b25	b24
	<u></u>		Con	trast -		-	
b23	b22	b21	b20	b19	b18	b17	b16
			Luminance	signal (Y)			
b15	b14	b13	b12	b11	b10	b9	b8
		Color	difference	signal (Cr :	= R-Y)		
b7	b6	b5	b4	b3	b2	b1	b0
		Color	difference :	signal (Cb	= B-Y)		

FIG. 50

PGC PGMAP

·	
	Entry cell number of program #1
	Entry cell number of program #2
	Entry cell number of program #n

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Entry cell number

	Contents	
ECELLN	Entry cell number	

FIG. 52

C_PBIT

Cell playback information #	1 (C_PBI1)
Cell playback information #	2 (C_PBI2)
:	
Cell playback information #	n (C_PBIn)

FIG. 53

C_PBI

	Contents
C_CAT	Cell category
C_PBTM	Cell playback time
C_FVOBU_SA	Start address of first VOBU in cell
C_LVOBU_SA	Start address of last VOBU in cell

FIG. 54

C POSI

 Cell position information #1 (C_POSIT1)	
:	
 Cell position information #n (C_POSITn)	

FIG. 55

C_POSI

Contents		
C_VOB_IDN	VOB ID number in cell	
C_IDN	ID number of the cell	

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VTSM_PGI_UT

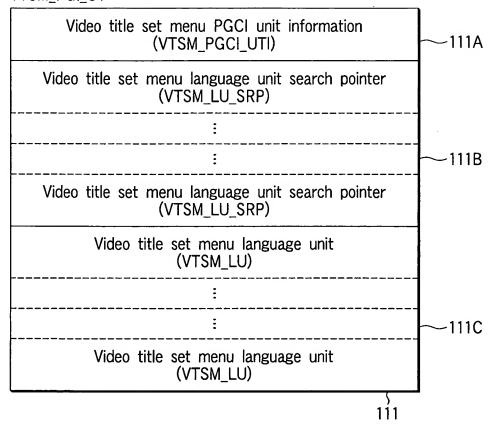


FIG. 57

VTSM_PGCI_UTI

	Contents	
VTSM_LU_Ns	Number of video title set menu language units	
VTSM_PGCI_UT_EA	End address of video title set menu language unit	

FIG. 58

VTSM_LU_SRP

	Contents	
VTSM_LCD	Video title set menu language code	
VTSM_LU_SA	Start address of video title set menu language unit	

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VTSM_LU

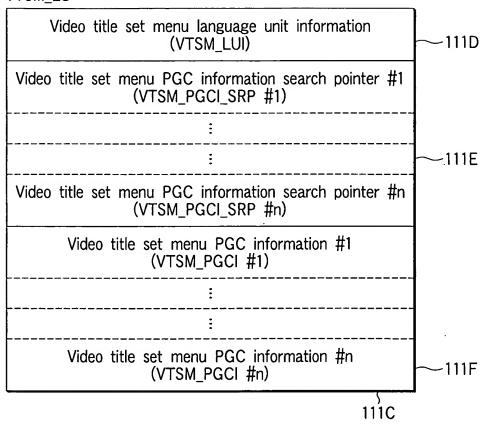


FIG. 60

VTSM_LUI

	Contents	
VTSM_PGC_Ns	Number of VTSM program chain information items	
VTSM_LU_EA	End address of video title set menu PGC information	

FIG. 61

VTSM_PGCI_SRP

	Contents	
VTSM_PGC_CAT	Category of program chain of video title set menu	
VTSM_PGCI_SA	Start address of VTSM program chain information	

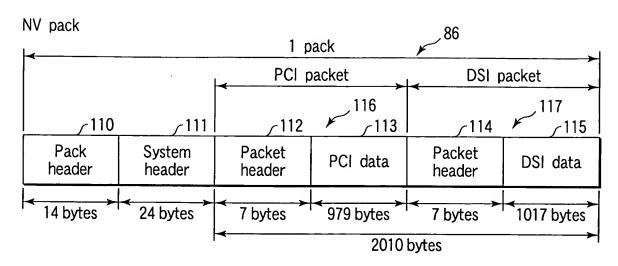


FIG. 63

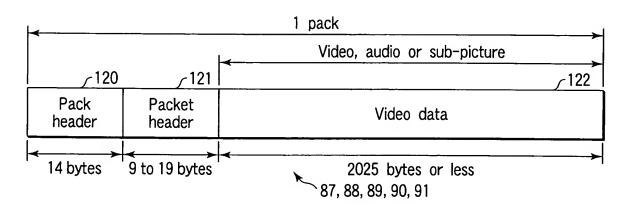


FIG. 64

PCI		(Description order)
	Contents	Number of bytes
PCI_GI	PCI general information	60 bytes
NSML_AGLI	Non-Angle information for seamless	36 bytes
HLI	Highlight information	766 bytes
RECI	Storage information	117 bytes
	Total	979 bytes

FIG. 65

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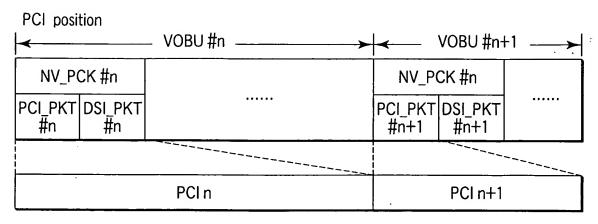


FIG. 66

PCI_GI		(Description order)
	Contents	Number of bytes
(1) NV_PCK_LBN	LBN of Navigation pack	4 bytes
(2) VOBU_CAT	Category of VOBU	2 bytes
reserved	reserved	2 bytes
(3) VOBU_UOP_CTL	User Operation control of VOBU	4 bytes
(4) VOBU_S_PTM	Start PTM of VOBU	4 bytes
(5) VOBU_E_PTM	End PTM of VOBU	4 bytes
(6) VOBU_SE_E_PTM	End PTM of sequence end in VOBU	4 bytes
(7) C_ELTM	Cell Elapse Time	4 bytes
reserved	reserved	32 bytes
	Total	60 bytes

FIG. 67

VOBU_CAT b15 b14 b13 b12 b11 b10 b9 b8 **APSTB** reserved b6 **b**5 b3 b2 b7 b4 b0 b1 reserved

FIG. 68

NSML_AGLI

	Contents
NSML_AGL_C1_DSTA	Address of destination VOBU in AGI_C1
NSML_AGL_C2_DSTA	Address of destination VOBU in AGI_C2
NSML_AGL_C3_DSTA	Address of destination VOBU in AGI_C3
NSML_AGL_C4_DSTA	Address of destination VOBU in AGI_C4
NSML_AGL_C5_DSTA	Address of destination VOBU in AGI_C5
NSML_AGL_C6_DSTA	Address of destination VOBU in AGI_C6
NSML_AGL_C7_DSTA	Address of destination VOBU in AGI_C7
NSML_AGL_C8_DSTA	Address of destination VOBU in AGI_C8
NSML_AGL_C9_DSTA	Address of destination VOBU in AGI_C9

FIG. 69

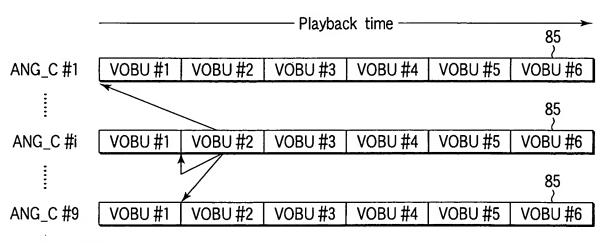
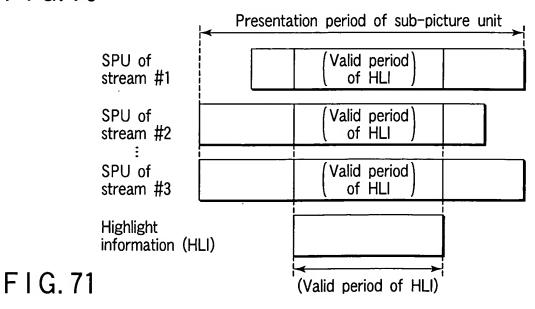
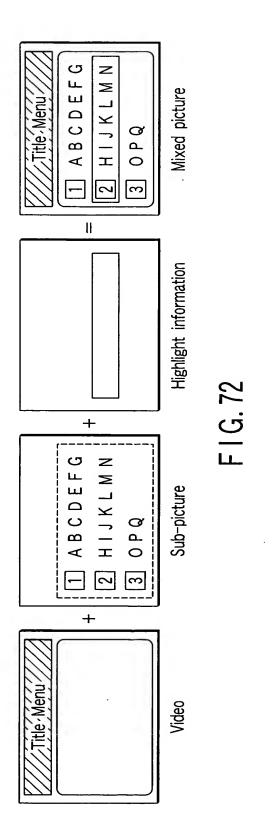


FIG. 70

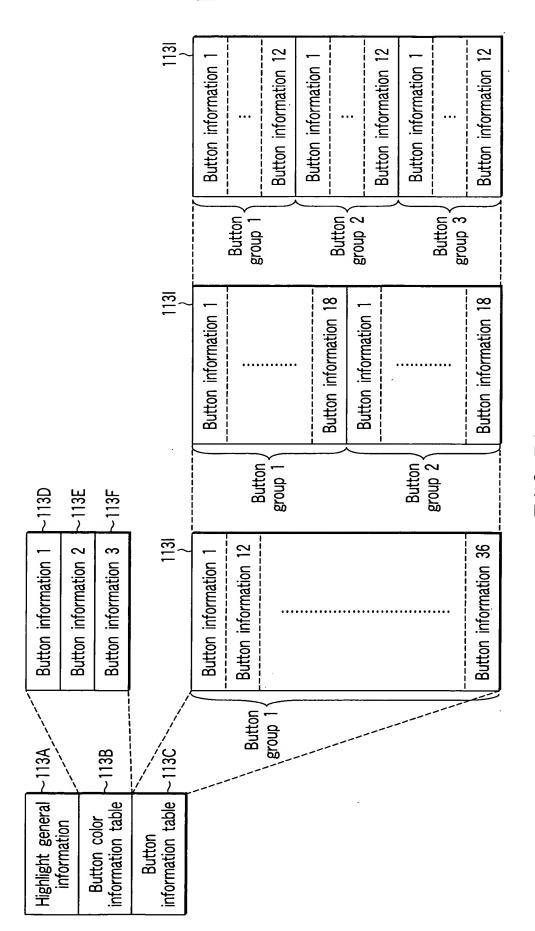




L_GIHighlight general information22BTN_COLITButton color information table32×3BTNITButton information table18×36

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F1G.73



F1G. 74

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	<u>.ui</u>						
			Co	ontents		Number of	bytes
(1)	HLI_SS	Statu	s of HLI			2 byte	s
(2)	HLI_S_PTM	Start	PTM of H	Ll		4 byte	·s
(3)	HLI_E_PTM	End I	PTM of HL	l		4 byte	·s
(4)	BTN_SL_E_PTM	End f	PTM of Bu	tton select		4 byte	S
(5)	BTN_MD	Butto	n mode			2 byte	S
(6)	BTN_OFN	Butto	n Offset n	umber		1 byte	S
(7)	BTN_Ns	Numb	er of Butt	ons		1 byte	S
(8)	NSL_BTN_Ns	Numb	er of Num	erical Selec	t Buttons	1 byte	S
	reserved	reserv	/ed			1 byte	S
(9)	FOSL_BTNN	Force	dly Selecte	d Button n	umber	1 byte	S
(10)	FOAC_BTNN	Force	dly Activat	ed Button	number	1 byte	S
		Total				22 byte	<u>s</u>
FIG.	. 75						
b15		013	HLI b12	_SS b11	b10	b 9	b8
013	D14 . L	713			D10	Ų3	DO
			rese	rved			· · · · · · · · · · · · · · · · · · ·
b7	b6	b5	b4	b3 .	b2	b1	b0
		rese	erved		•	HLI_	SS
	70					1	
FIG.	. 70		1111.0	DTM			
b31	b30 b	29	⊓∟i_ა b28	_PTM b27	b26	b25	b24
				1 [31 24]			- DE4
				1 [0124]	 -		
b23	b22 t	21	b20	b19.	b18	b17	b16
			HLI_S_PTN	1 [23 16]			
b15	b14 b	13	b12	b11	b10	b9	b8
			HLI_S_PTI	M [158]			
b7	b6 1	05	b4	b3	b2	b1	b0
			HLI_S_PT	M [70]			

Start PTM of $HLI = HLI_S_PTM [31..0] / 90000 [seconds]$

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HLI_E_PTM

b31	b30	b29	b28	b27	b26	b25	b24
			HLI_E_PTN	И [3124]		
b23	b22	b21	b20	b19	b18	b17	b16
			HLI_E_PTN	A [2316]		
b15	b14	b13	b12	b11	b10	b9	b8
			HLI_E_PT	M [158]			
b7	b6	b5	b4 HILE PT	b3 M [70]	b2	b1	b0
			1 161_6_1 1	[U 1] IVI			

End PTM of HLI = HLI_E_PTM [31..0]/90000 [seconds]

FIG. 78

BTN_SL_E_PTM b31 b30 b29 b28 b27 b25 b26 b24 BTN_SL_E_PTM [31..24] b23 b20 b22 b19 b18 b21 b17 b16 BTN_SL_E_PTM [23..16] b15 b13 b12 b10 b8 b14 b11 b9 BTN_SL_E_PTM [15..8] b7 b6 b5 b3 b2 b4 b1 b0 BTN_SL_E_PTM [7..0]

End PTM of Button select = BTN_SL_E_PTM [31..0]/90000 [seconds]

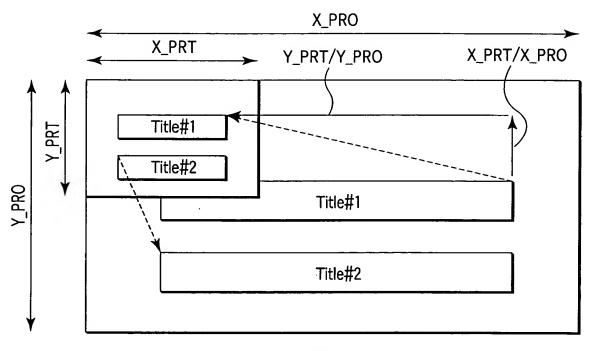
FIG. 79

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Button mode (BTN_MD)

b15	b14	b13	b12	b11	b10	b9	b8
HDGR	reserved	BTNG	R_Ns	reserved	BTN	GR1_DSP_	.TY
b7	b6	b 5	b4	b3	b2	b1	b0
reserved	BTNGR2_DSP_TY		reserved	BTN	GR3_DSP_	TY	

FIG. 80



F I G. 81

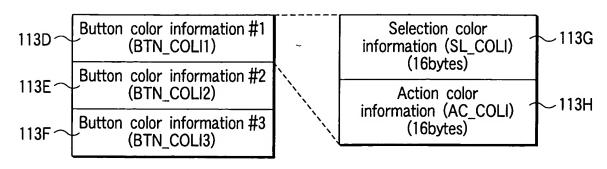


FIG. 82

Selection color information (SL_COLI)

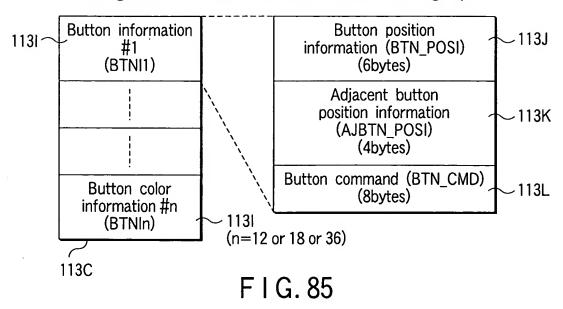
b127 b126 b125 b124	b123 b122 b121 b120
Selection contrast of pixel 16	Selection color code of pixel 16
b119 b118 b117 b116	b115 b114 b113 b112
Selection contrast of pixel 15	Selection color code of pixel 15
b111 b110 b109 b108	b107 b106 b105 b104
Selection contrast of pixel 14	Selection color code of pixel 14
b103 b102 b101 b100	b99 b98 b97 b96
Selection contrast of pixel 13	Selection color code of pixel 13
b95 b94 b93 b92	b91 b90 b89 b88
Selection contrast of pixel 12	Selection color code of pixel 12
b87 b86 b85 b84	b83 b82 b81 b80
Selection contrast of pixel 11	Selection color code of pixel 11
b79 b78 b77 b76	b75 b74 b73 b72
Selection contrast of pixel 10	Selection color code of pixel 10
b71 b70 b69 b68	b67 b66 b65 b64
Selection contrast of pixel 9	Selection color code of pixel 9
b63 b62 b61 b60	b59 b58 b57 b56
Selection contrast of pixel 8	Selection color code of pixel 8
b55 b54 b53 b52	b51 b50 b49 b48
Selection contrast of pixel 7	Selection color code of pixel 7
b47 b46 b45 b44	b43 b42 b41 b40
Selection contrast of pixel 6	Selection color code of pixel 6
b39 b38 b37 b36	b35 b34 b33 b32
Selection contrast of pixel 5	Selection color code of pixel 5
b31 b30 b29 b28	b27 b26 b25 b24
Selection contrast of pixel 4	Selection color code of pixel 4
b23 b22 b21 b20	b19 b18 b17 b16
Selection contrast of pixel 3	Selection color code of pixel 3
b15 b14 b13 b12	b11 b10 b9 b8
Selection contrast of pixel 2	Selection color code of pixel 2
b7 b6 b5 b4	b3 b2 b1 b0
Selection contrast of pixel 1	Selection color code of pixel 1

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Action color information (AC_COLI)

b127 b126 b125 b124	b123 b122 b121 b120
Action contrast of pixel 16	Action color code of pixel 16
b119 b118 b117 b116	b115 b114 b113 b112
Action contrast of pixel 15	Action color code of pixel 15
b111 b110 b109 b108	b107 b106 b105 b104
Action contrast of pixel 14	Action color code of pixel 14
b103 b102 b101 b100	b99 b98 b97 b96
Action contrast of pixel 13	Action color code of pixel 13
b95 b94 b93 b92	b91 b90 b89 b88
Action contrast of pixel 12	Action color code of pixel 12
b87 b86 b85 b84	b83 b82 b81 b80
Action contrast of pixel 11	Action color code of pixel 11
b79 b78 b77 b76	b75 b74 b73 b72
Action contrast of pixel 10	Action color code of pixel 10
b71 b70 b69 b68	b67 b66 b65 b64
Action contrast of pixel 9	Action color code of pixel 9
b63 b62 b61 b60	b59 b58 b57 b56
Action contrast of pixel 8	Action color code of pixel 8
b55 b54 b53 b52 .	b51 b50 b49 b48
Action contrast of pixel 7	Action color code of pixel 7
b47 b46 b45 b44	b43 b42 b41 b40
Action contrast of pixel 6	Action color code of pixel 6
b39 b38 b37 b36	b35 b34 b33 b32
Action contrast of pixel 5	Action color code of pixel 5
b31 b30 b29 b28	b27 b26 b25 b24
Action contrast of pixel 4	Action color code of pixel 4
b23 b22 b21 b20	b19 b18 b17 b16
Action contrast of pixel 3	Action color code of pixel 3
b15 b14 b13 b12	b11 b10 b9 b8
Action contrast of pixel 2	Action color code of pixel 2
b7 b6 b5 b4	b3 b2 b1 b0
Action contrast of pixel 1	Action color code of pixel 1

Configuration of button information table of each group



Button position information (BTN_POSI)

<u>b47</u>	b46	b45	b44	b43	b42	b41	<u>b40</u>
	n color mber		Start	X-coordir	nate (upper	r bits)	
b39	b38_	b37	b36	b35	b34	b33	b32
	Start X-co	ordinate (lower bits)			X-coordir upper bits	
b31	b30	b29	b28	b27	b26	b25	b24
		End	X-coordin	ate (lower	bits)		
b23	b22	b21	b20	b19	b18	b17	b16
Auto ac	to action mode Start Y-coordinate (upper bits)						
b15	b14	b13	b12	b11	b10	b9	b8
	Start V-Coordinate Hower Nitch I				d Y-coordii (upper bits		
b7	b6	b5	b4	b3	b2	b1	b0
		End	Y-coordin	ate (lower	bits)		

			TV system	1	
	525/60	625/50	HDTV-1280	HDTV-1440	HDTV-1920
X-coordinate value	0~719	0~719	0~1279	0~1439	0~1919
Y-coordinate value	2~479	2~574	2~719	2~1079	2~1079

FIG. 87

Adjacent button position information (AJBTN_POSI)

b31	b30	b29	b28	b27	b26	b25	b24
	reserved	_		Uppe	r button nu	umber	
b23	b22	b21	b20	b19	b18	b17	b16
	reserved			Lower	r button nu	umber	
b15	b14	b13	b12	b11	b10	b9	b8
	reserved		Left button number				
b7	b6	b5	b4	b3	b2	b1	b0
	reserved			Right	button nu	ımber	

FIG. 88

RECI		Description) order
	Contents	Number of bytes
ISRC_V	ISRC of video data in Video stream	10 bytes
ISRC_A0	ISRC of audio data in Decoding Audio stream #0	10 bytes
ISRC_A1	ISRC of audio data in Decoding Audio stream #1	10 bytes
ISRC_A2	ISRC of audio data in Decoding Audio stream #2	10 bytes
ISRC_A3	ISRC of audio data in Decoding Audio stream #3	10 bytes
ISRC_A4	ISRC of audio data in Decoding Audio stream #4	10 bytes
ISRÇ_A5	ISRC of audio data in Decoding Audio stream #5	10 bytes
ISRC_A6	ISRC of audio data in Decoding Audio stream #6	10 bytes
ISRC_A7	ISRC of audio data in Decoding Audio stream #7	10 bytes
ISRC_SP0	ISRC of SP data in Decording SP stream #0,#8,#16 or #24	10 bytes
ISRC_SP1	ISRC of SP data in Decording SP stream #1,#9,#17 or #25	10 bytes
ISRC_SP2	ISRC of SP data in Decording SP stream #2,#10,#18 or #26	10 bytes
ISRC_SP3	ISRC of SP data in Decording SP stream #3,#11,#19 or #27	10 bytes
ISRC_SP4	ISRC of SP data in Decording SP stream #4,#12,#20 or #28	10 bytes
ISRC_SP5	ISRC of SP data in Decording SP stream #5,#13,#21 or #29	10 bytes
ISRC_SP6	ISRC of SP data in Decording SP stream #6,#14,#22 or #30	10 bytes
ISRC_SP7	ISRC of SP data in Decording SP stream #7,#15,#23 or #31	10 bytes
ISRC_SP_SEL	Selected SP stream group for ISRC	1 byte
reserved	reserved	18 bytes
	Total	117 bytes

DSI		(Description order)
	Contents	Number of bytes
DSI_GI	DSI general information	32 bytes
SML_PBI	Seamless playback information	148 bytes
SML_AGLI	Angle information for seamless	54 bytes
VOBU_SRI	VOBU search information	168 bytes
SYNCI	Synchronous information	144 bytes
reserved	reserved	471 bytes
	Total	1017 bytes

FIG. 90

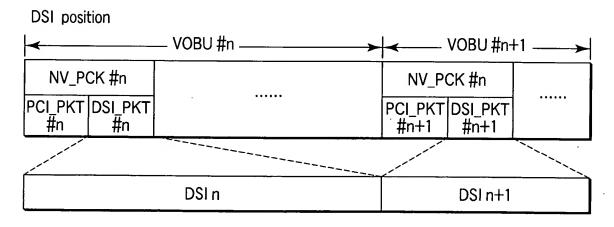


FIG. 91

Contents
SCR of NV pack
LBN of NV pack
End address of VOBU
End address of the first reference picture
VOB ID number of the VOBU
Cell ID number of the VOBU

FIG. 92

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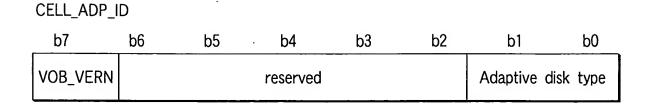


FIG. 93

SML_AGLI	
	Contents
SML_AGL-C1_DSTA	Destination address of AGL_C #1
SML_AGL-C2_DSTA	Destination address of AGL_C #2
SML_AGL-C3_DSTA	Destination address of AGL_C #3
SML_AGL-C4_DSTA	Destination address of AGL_C #4
SML_AGL-C5_DSTA	Destination address of AGL_C #5
SML_AGL-C6_DSTA	Destination address of AGL_C #6
SML_AGL-C7_DSTA	Destination address of AGL_C #7
SML_AGL-C8_DSTA	Destination address of AGL_C #8
SML_AGL-C9_DSTA	Destination address of AGL_C #9

FIG. 94

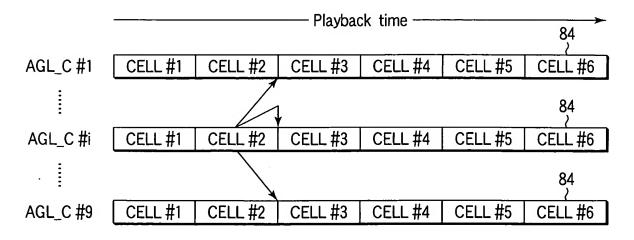


FIG. 95

VOBU_SRI

	Contents
FWDI 240	+ 240 VOBU start address and Video exist flag
FWDI 120	+ 120 VOBU start address and Video exist flag
FWDI 60	+ 60 VOBU start address and Video exist flag
FWDI 20	+ 20 VOBU start address and Video exist flag
FWDI 15	+ 15 VOBU start address and Video exist flag
FWDI 14	+ 14 VOBU start address and Video exist flag
FWDI 13	+ 13 VOBU start address and Video exist flag
FWDI 12	+ 12 VOBU start address and Video exist flag
FWDI 11	+ 11 VOBU start address and Video exist flag
FWDI 10	+ 10 VOBU start address and Video exist flag
FWDI 9	+ 9 VOBU start address and Video exist flag
FWDI 8	+ 8 VOBU start address and Video exist flag
FWDI 7	+ 7 VOBU start address and Video exist flag
FWDI 6	+ 6 VOBU start address and Video exist flag
FWDI 5	+ 5 VOBU start address and Video exist flag
FWDI 4	+ 4 VOBU start address and Video exist flag
FWDI 3	+ 3 VOBU start address and Video exist flag
FWDI 2	+ 2 VOBU start address and Video exist flag
FWDI 1	+ 1 VOBU start address and Video exist flag
BWDI Next	Next VOBU start address and Video exist flag
BWDI Prev	Previous VOBU start address and Video exist flag
BWDI 1	- 1 VOBU start address and Video exist flag
BWDI 2	- 2 VOBU start address and Video exist flag
BWDI 3	- 3 VOBU start address and Video exist flag
BWDI 4	- 4 VOBU start address and Video exist flag
BWDI 5	- 5 VOBU start address and Video exist flag
BWDI 6	- 6 VOBU start address and Video exist flag
BWDI 7	- 7 VOBU start address and Video exist flag
BWDI 8	- 8 VOBU start address and Video exist flag
BWDI 9	- 9 VOBU start address and Video exist flag
BWDI 10	- 10 VOBU start address and Video exist flag
BWDI 11	- 11 VOBU start address and Video exist flag
BWDI 12	- 12 VOBU start address and Video exist flag
BWDI 13	- 13 VOBU start address and Video exist flag
BWDI 14	- 14 VOBU start address and Video exist flag
BWDI 15	- 15 VOBU start address and Video exist flag
BWDI 20	- 20 VOBU start address and Video exist flag
BWDI 60	- 60 VOBU start address and Video exist flag
BWDI 120	- 120 VOBU start address and Video exist flag
BWDI 240	- 240 VOBU start address and Video exist flag

Forward address (FWDIn)

b31	b30	b29	b28	b27	b26	b25	b24						
V_FWD _Exist 1	V_FWD _Exist 2	FWDIn [2924]											
b23	b22	b21	b21 b20 b19 b18 b17										
	FWDIn [2316]												
b15	b14	b13	b12	b11	b10	b9	b8						
			FWDIn	[158]									
b7	b6	b5	b4	b3	b2	b1	b0						
			FWDIn	[70]									

FIG. 97

Backward address (BWDIn)

b31	b30	b29	b28	b27	b26	b25	b24						
V_BWD _Exist 1	V_BWD _Exist 2	BWDIn [2924]											
b23	b22	b21	b20	b19	b18	b17	b16						
			BWDIn	[2316]									
b15	b14	b13	b12	b11	b10	b9	b8						
		<u>.</u>	BWDln	[158]									
b7	b6	b5	b4	b3	b2	b1	b0						
			BWDIn	[70]									

FIG. 98

SYNCI

	Contents
A_SYNCA 0 to 7	Target audio pack (A_PCK) address
SP_SYNCA 0 to 31	VOBU start address for target sub-picture pack (SP_PCK)

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SPRM (14): Video player configuration (P_CFG)

b15	b14 b13		b12	b11	b10	b 9	b8					
reserved		rese	reserved		display ratio	Current display mode						
b7	b7 b6 b5 b4				b2	b1	b0					
reserved												

FIG. 100

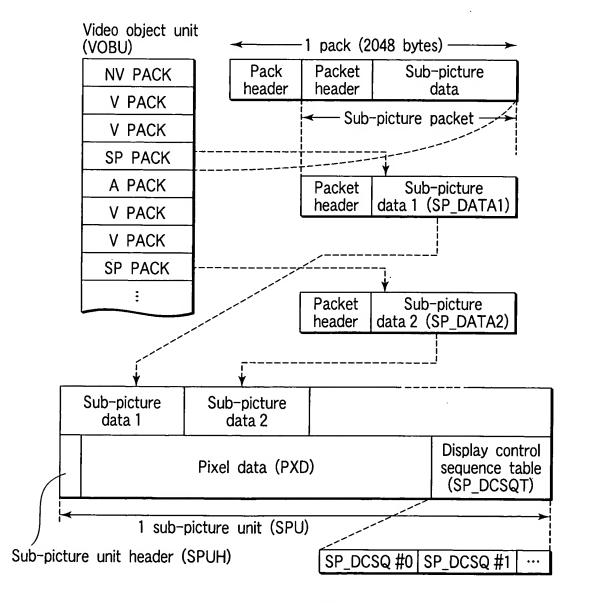
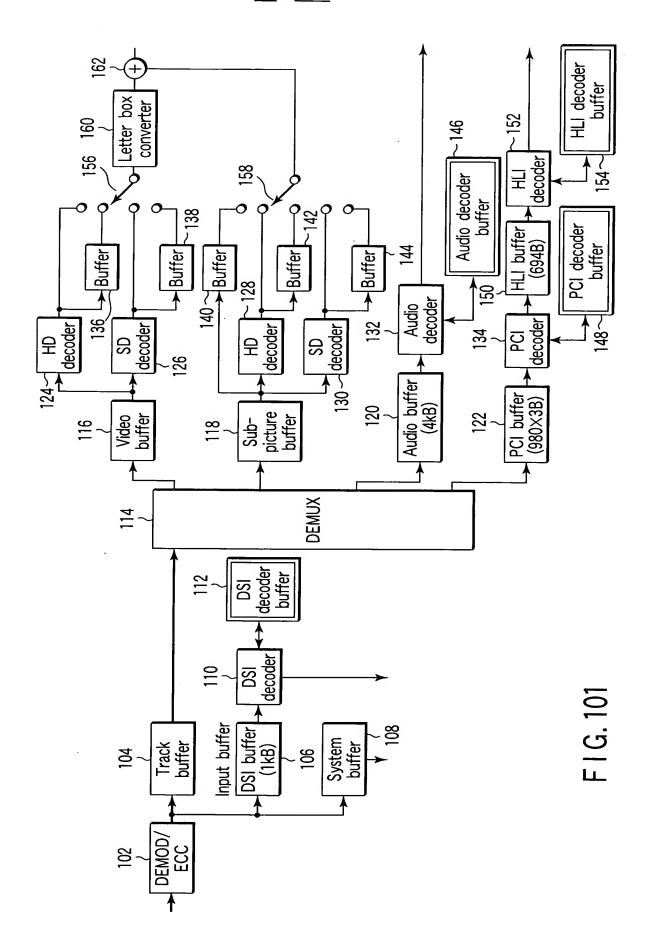
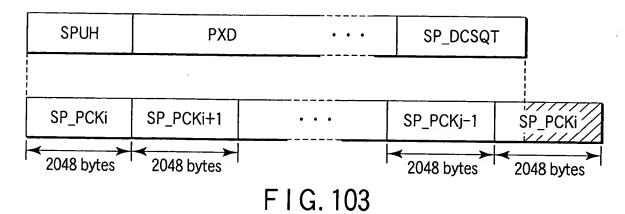


FIG. 102



Sub-picture unit (SPU) and sub-picture pack (SP_PCK)



Sub-picture unit header (SPUH)

Description order

	Description order
Contents	Number of bytes
Size of sub-picture unit	4 bytes
Start address of display control sequence table	4 bytes
Width of pixel data	4 bytes
Height of pixel data	4 bytes
Sub-picture category	1 bytes
reserved	1 bytes
Total	18 bytes
	Size of sub-picture unit Start address of display control sequence table Width of pixel data Height of pixel data Sub-picture category reserved

FIG. 104

			SP_	CAT			
b7	b6	b5	<u>b4</u>	b3	b2	<u>b1</u>	b0
		res	served			Stored_ Form	Raw

FIG. 105

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Allocation of pixel data

Pixel name	Pixel data
Pixel 1	0000
Pixel 2	0001
Pixel 3	0010
Pixel 4	0011
Pixel 5	0100
Pixel 6	0101
Pixel 7	0110
Pixel 8	0111
Pixel 9	1000
Pixel 10	1001
Pixel 11	1010
Pixel 12	1011
Pixel 13	1100
Pixel 14	1101
Pixel 15	1110
Pixel 16	1111

FIG. 106

Pixel data allocation example (1)

CDI III	PXD	
SPUH	For top field For bottom field	SP_DCSQT

F I G. 107A

Pixel data allocation example (2)

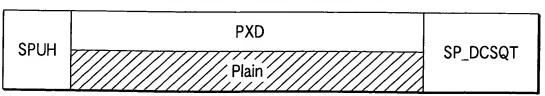


FIG. 107B

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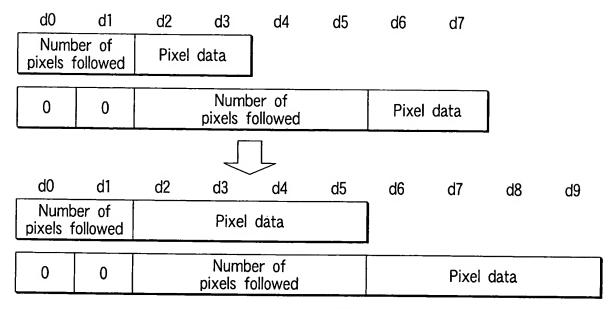
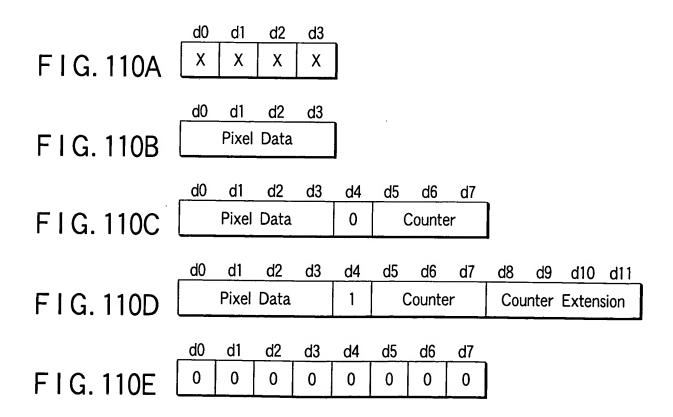
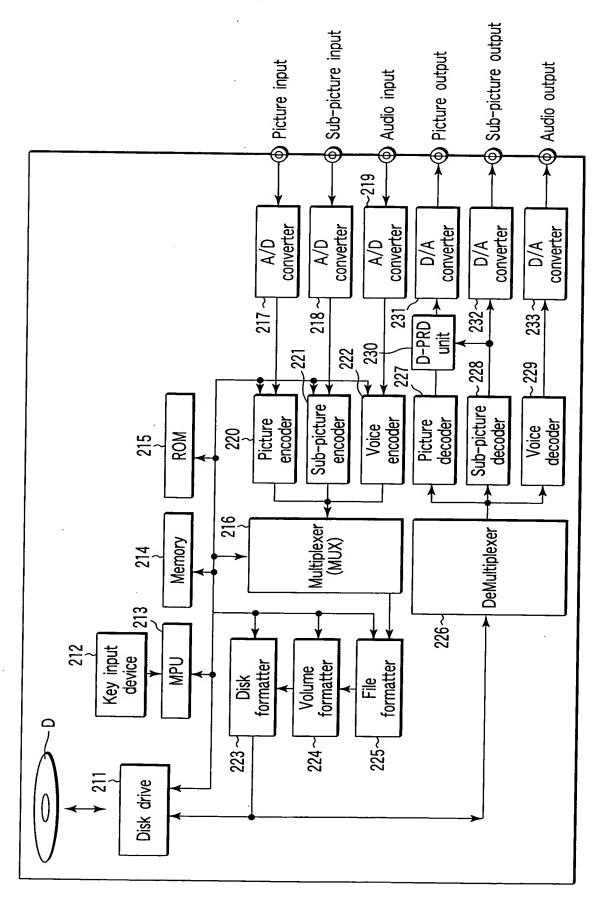


FIG. 108

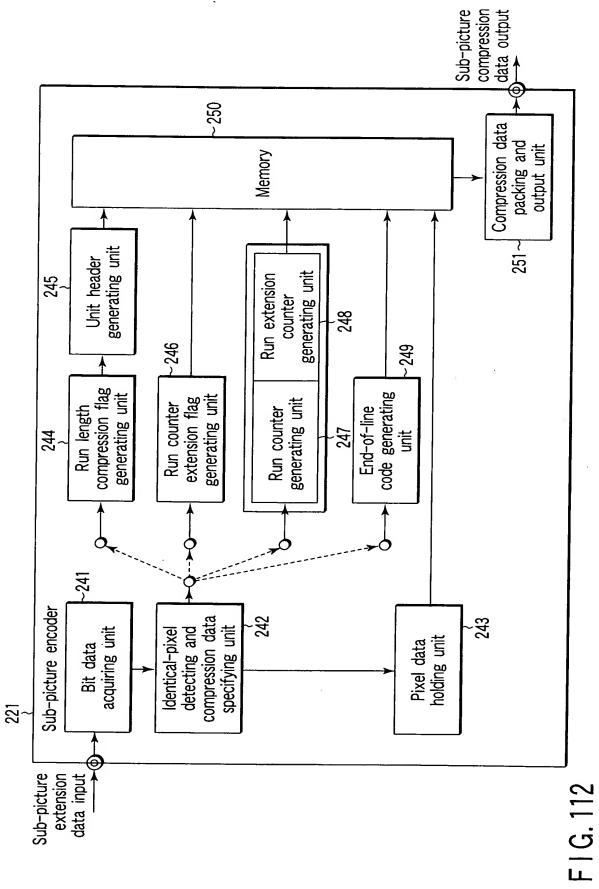
d0	<u>d1</u>	d2_	d3	d4	d5	d6	d7	d8	d9	d10	d11	d12
Comp		Pixel	data		Ext	(Counte	r	(Counte When I		

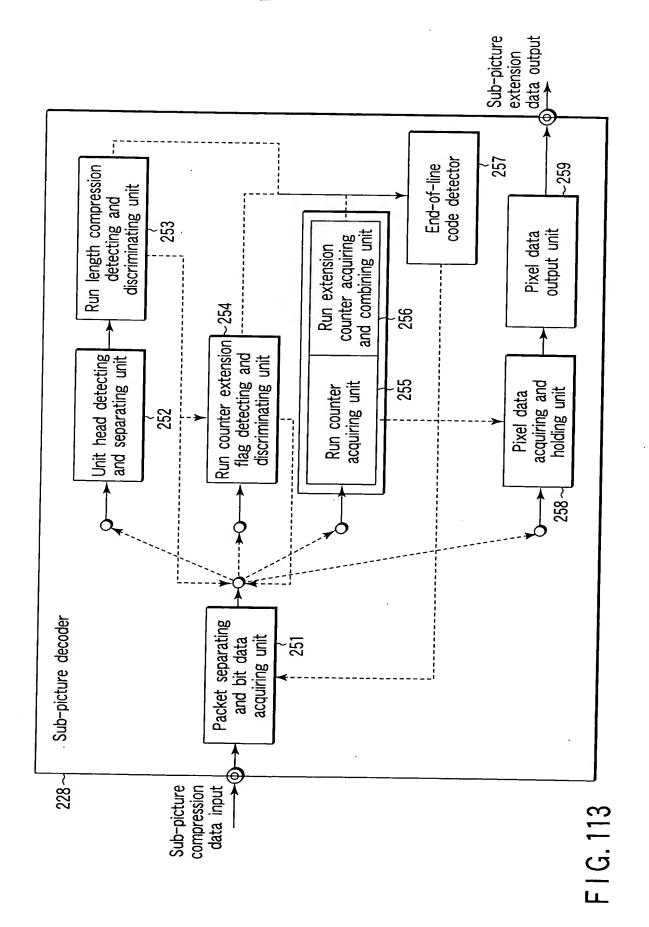
FIG. 109

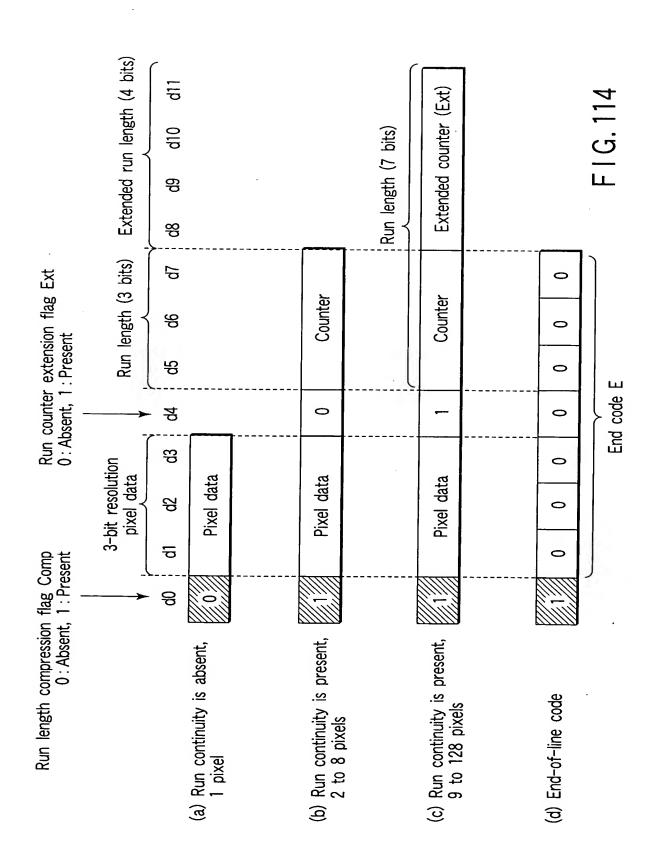




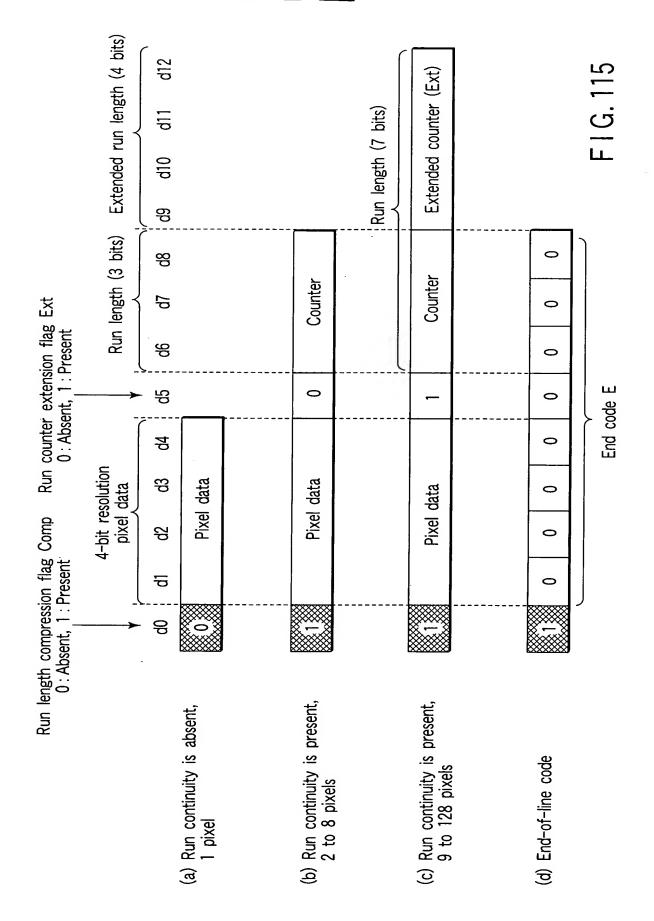
F1G. 111

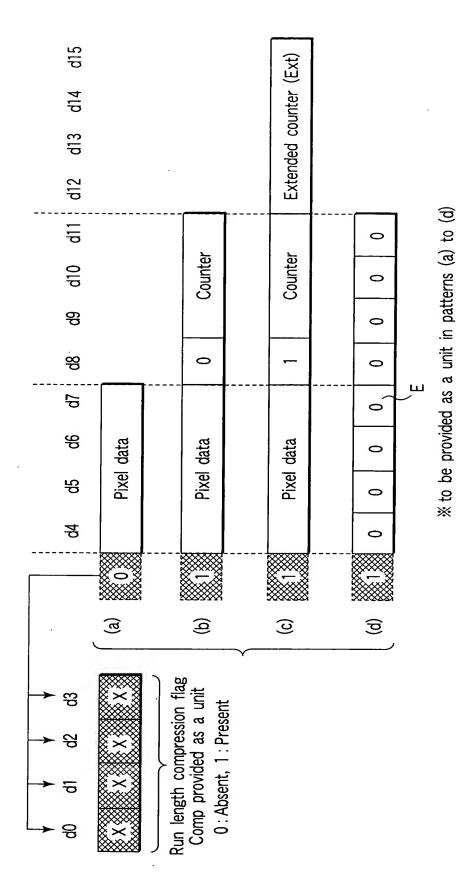




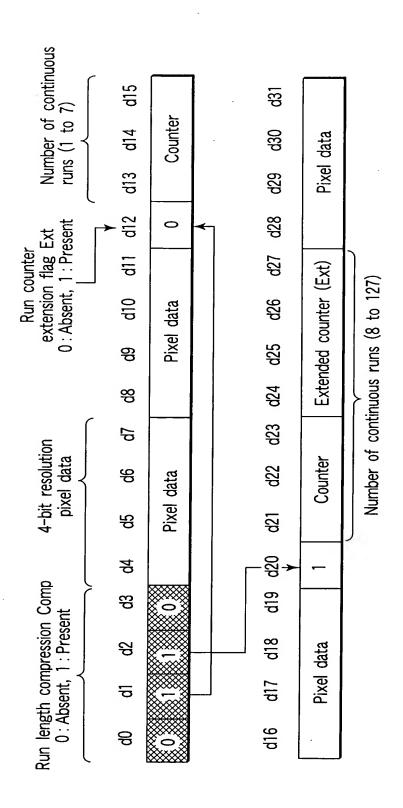


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F1G.116

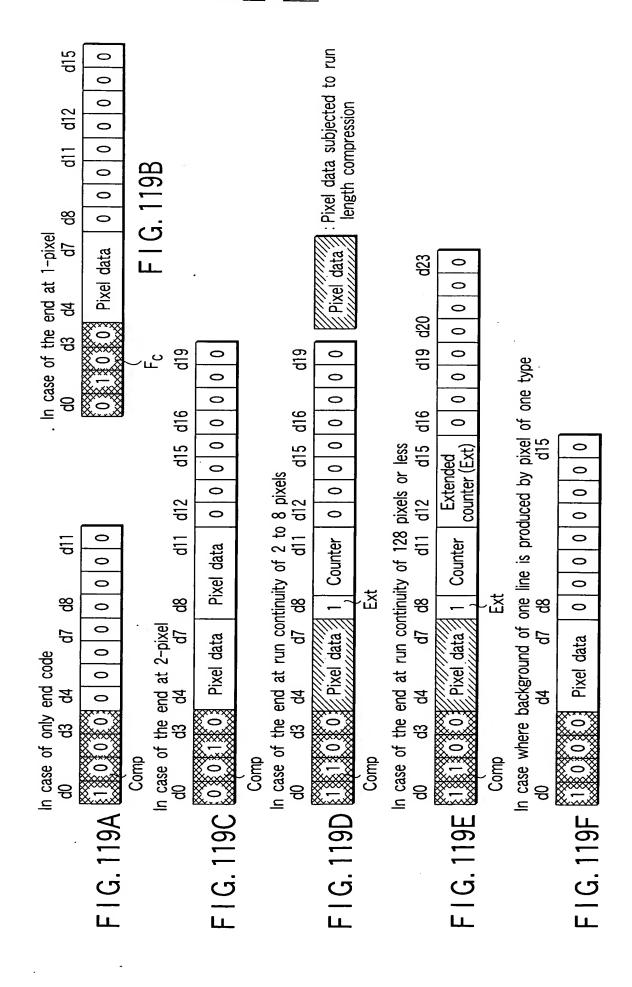


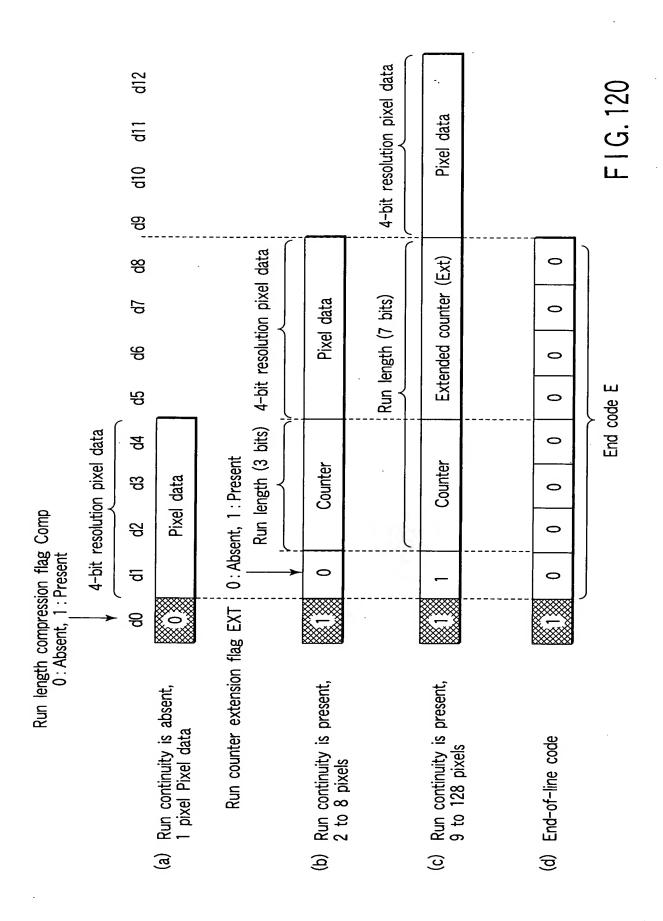
F1G. 117

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				: Pixel data subjected to	run length compression								
			pixels or less	Pixel data		In case where compression of 9 to 128 run continuities is provided: Expression of (128 + 3) pixels or less d0 d3 d4 d7 d8 d11 d12 d15 d16 d19 d20 d23 d24 d27	Pixel data		or less	124 d27	Extended counter (Ext)	148 d51	Extended counter (Ext)
			ion of (8 + 3) 120 d23	Pixel data		ssion of (128+3 d20 d23 c	Pixel data		3 + 128) pixels	120 d23 d24	Counter c	144 d47 d48	Counter
pression d16 d19	Pixel data		In case where compression of 8 or less run continuities is provided : Expression of (8 + 3) pixels or less d0 d3 d4 d7 d8 d11 d12 d15 d16 d19 d20 d23	Pixel data		provided : Express d16 d19 c	Pixel data		longest pattern): Expression of (128 + 128 + 128 + 128) pixels or less	116 d19 d20	Pixel data	140 d43 d44	Pixel data
In case of all non-compressions (shortest pattern): 4-pixel expression d0 d3 d4 d7 d8 d11 d12 d15 d16	Pixel data	*	ontinuities is provid d12 d15 d16	Pixel data		ontinuities is pr d12 d15 c	Extended counter (Ext)		Expression of (d12 d15 d16	Extended counter (Ext)	d36 d39 d40	Extended counter (Ext)
(shortest pattered)	Pixel data		or less run cod8 d11	0 Counter	Ext	to 128 run co	1 Counter	Ext	gest pattern): F	d8 d11	1 Counter	d32 Ext d35	1 Counter Ext
n-compressions d4 d7	Pixel data		ompression of 8 d4 d7	Pixel data		ompression of 9 d4 d7	Pixel data		npressions (lon	d4 d7	Pixel data	d28 d31 (Pixel data
case of all no d0 d3	FIG. 118A 00000	Comp	case where co	FIG. 118B 000000	Comp	case where co d0 d3	1 0 0 0	Comp	In case of all compressions (I	do d3		Comp	777777
<u> </u>	i. 118A		Ē	i. 118B		<u> </u>	F1G.118C		드	6	FIG. 118D		
	FIG			FIG			FIG				F		

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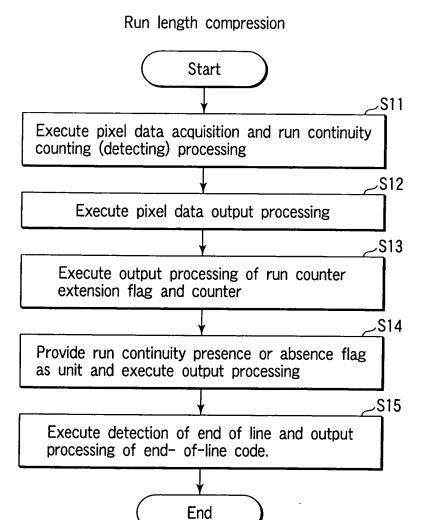
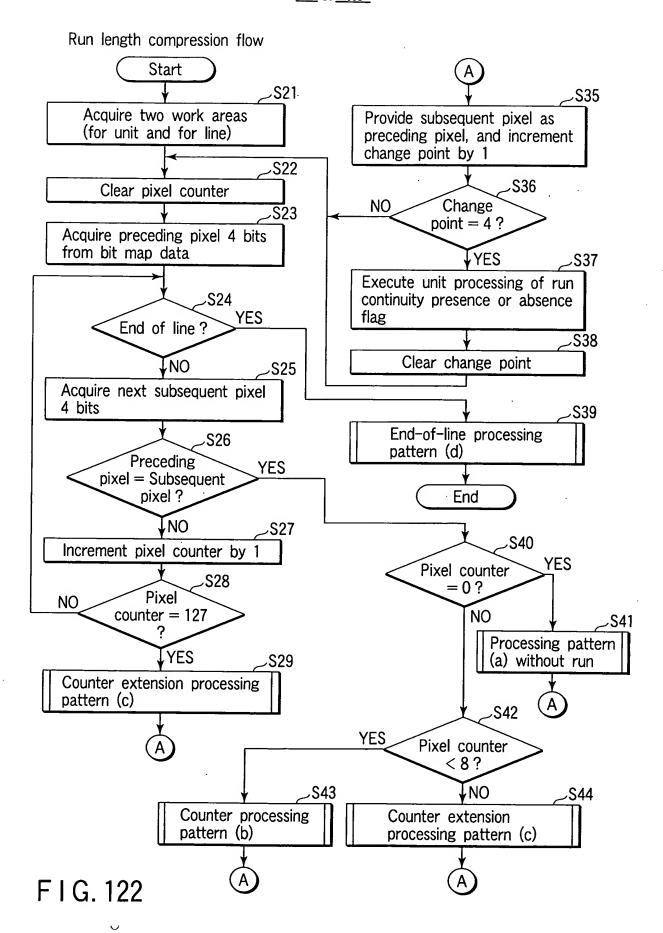
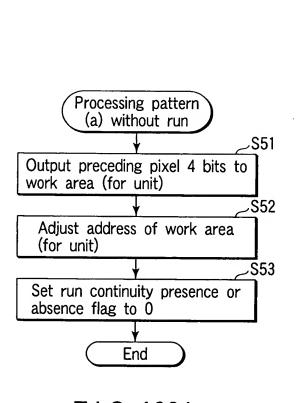


FIG. 121





F I G. 123A

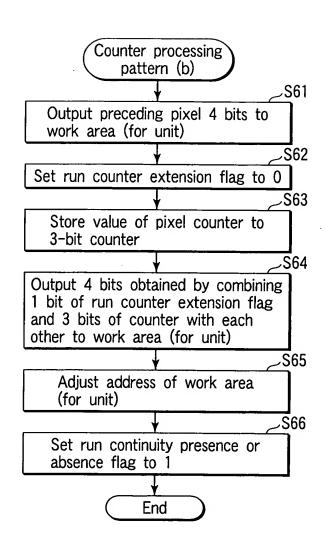


FIG. 123B

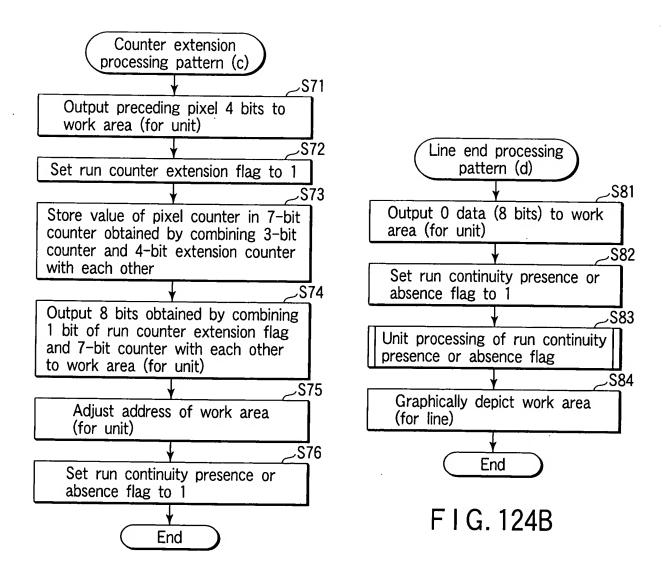


FIG. 124A

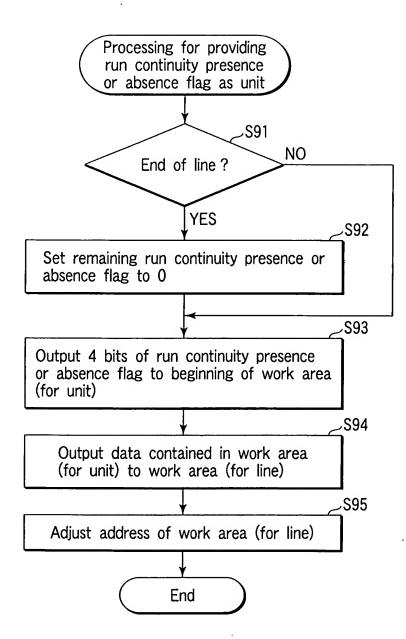


FIG. 125

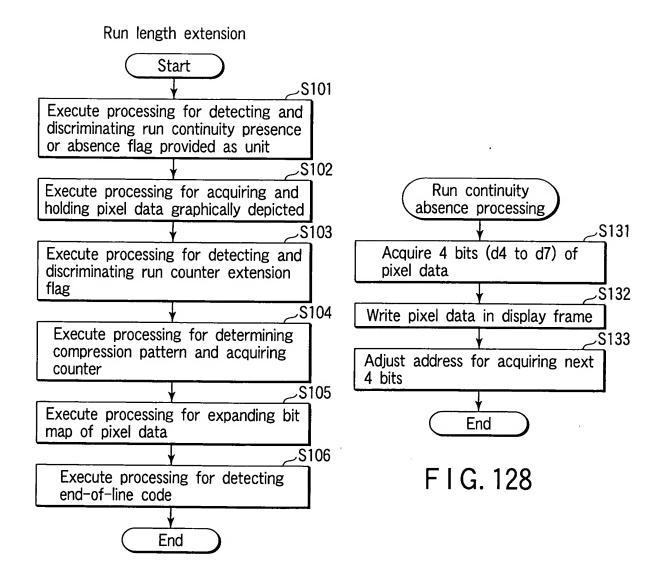


FIG. 126

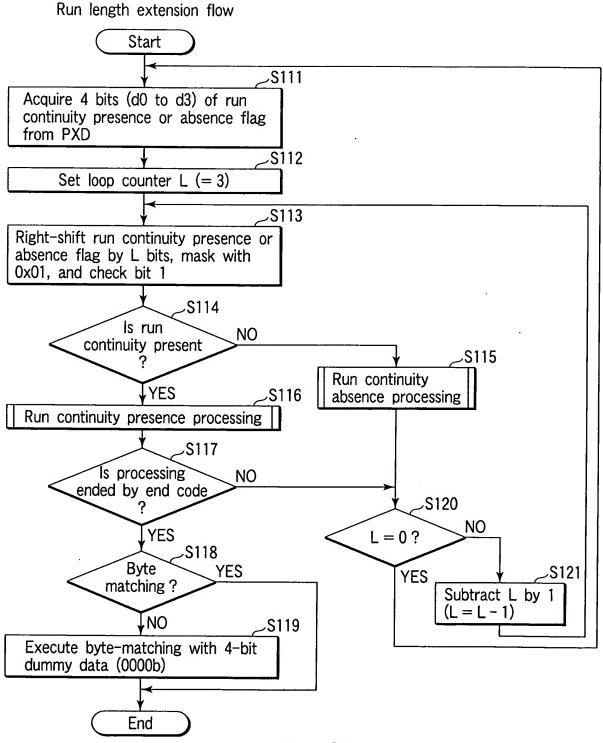


FIG. 127

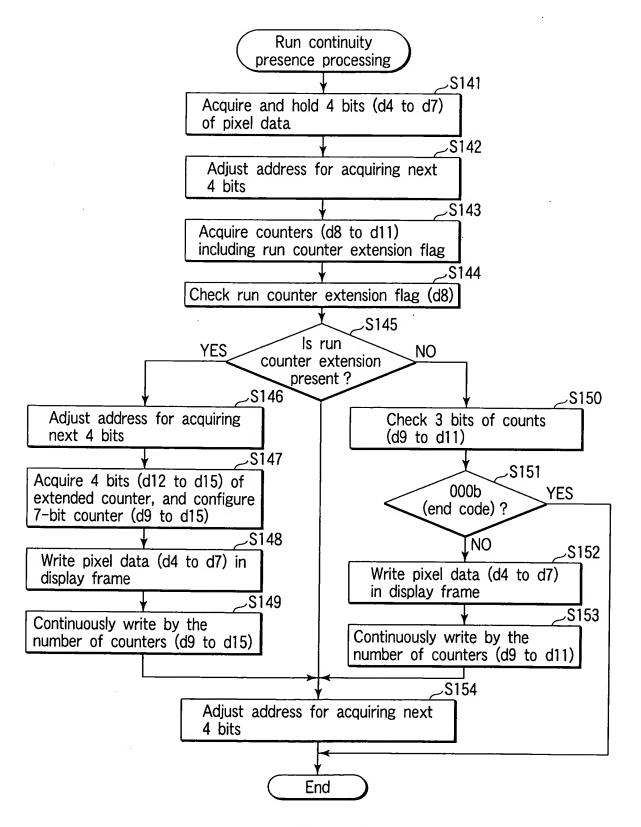


FIG. 129

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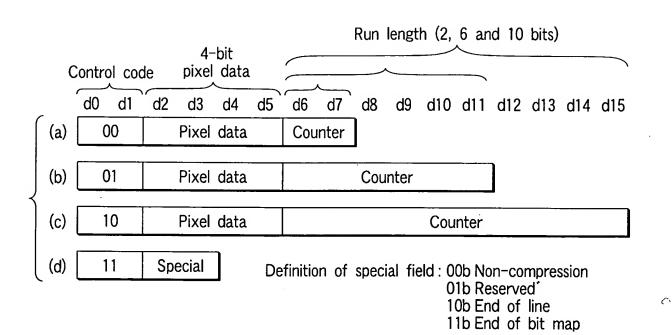


FIG. 130

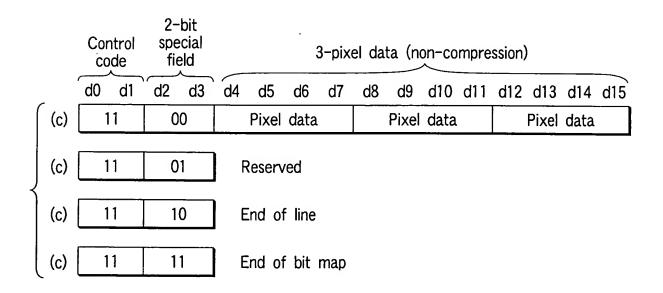


FIG. 131

Example of run length compression per unit

	P138	0100			•	
	P137	0100				
	:	÷		1	P138)	
	P13	0100		0100 1111 1111	(P11 to P138)	
	P12	0100		J		
	P11	0100		0011 0111	(P3 to P10)	
	P10	1100		8	(P3	
lata)	:	÷		1000	P2)	
PXD before compression (bit map data)	P4	0011		0010 0001	(P1 to P2)	
ssion (bi	B 3	0011	ion			
compre	P2	0010	PXD after compression	000	(P0)	
) before	P	0010	after o		er)	
PXC	P0	0001	PXC	0111	(Unit header)	

F1G. 13

	d0	d1	d2	d3	d4	d5	d6	d7	d8	d9	d10	d11	d12
С	omp 1	,	Pixel	data 1		Ext 1		Counter	1	(1	Cour When F	nter 1 xt 1=1	h)
_	'				_	11				(1)	WIICH L	XC 1 11	<i>U)</i>
_	d0	d1	d2	d3	d4	d5	_d6	d7	d8	d9	d10	d11	d12
C	omp		Pixel	data 2		Ext 2	(Counter	r 2	(A		nter 2 xt 2=11	h)
_	2					1				()	WIIGH L	XL 2— II	0)
	<u>d0</u>	d1	d2	d3	d4	d5	d6	d7	d8	d9	d10	d11	d12
C	omp		Pixel	data 3		Ext 3	(Counter	r 3	Λ		nter 3	6)
	3									(1	when E	xt 3=1	0)
	d0	d1	d2	d3	d4	d5	d6	d7	d8	d9	d10	d11	d12
C	omp		Pixel	data 4		Ext 4	C	Counter	r 4	Λ		nter 4	6)
	4									(1	when E	xt 4=1	0)
			•										
_	b5	55	b54	b!	53	b52	k	o51	b50		b49	b48	_
1	Con	1 מר	Comp	2 Con	18 an	Comp 4	1		Pix	el data	a 1		
Į					.,								
_	b4	17	b46	b ₄	15	b44	<u> </u>	o43	b42		b41	b40	_
į	Ex	t 1		Cour	iter 1			Co	unter 1	(When	Ext=1	b)	
į		_											
Г	b3	39	b38	b3	37	b36	<u> </u>	o35	b34	•	b33	b32	\neg
			Pix	el data	2		E	xt 2		Co	unter 2		
	b3	31	b30	b ₂	29	b28	<u> </u>	 o27	b26		b25	b24	
ſ			unter 2					-	Div	el data			
Į			uniter Z	(VVIICII L		 -			- 112	- uau			
_	b2	23	b22	b2	21	b20	<u>k</u>	019	b18		b17	b16	_
	Ex	t 3		Cour	iter 3			Co	unter 3	(When	Ext=1	b)	
•	b1	5	b14	b ²	13	b12	<u>-</u>	o11	b10		b9	b8	
ſ	<u> </u>	-	<u> </u>				_T		2.0				7
Pixel data 4					E	xt 4		Co	unter 4				
	b	7	b6	b	5	b4		b3	b2		b1	b0	
ſ			unter A	(When F	vt=1	1h)							
	Counter 4 (When Ext=1b)							_					

FIG. 133

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Display control sequence table (SP_DDCSQT)

Description order

	Contents
SP_DCSQ #0	Display control sequence #0
SP_DCSQ #1	Display control sequence #1
:	
•	
SP_DCSQ #n	Display control sequence #n

FIG. 134

Display control sequence	Display control sequence (SP_DCSQ)		
	Contents	Number of bytes	
(1)SP_DCSQ_STM	Start time of SP_DCSQ	2 bytes	
(2)SP_NXT_DCSQ_SA	Start address of next SP_DCSQ	4 bytes	
(3)SP_DCCMD #1	Display control command #1		
:	:		
SP_DCCMD #n	Display control command #n		

FIG. 135

b15	b14	b13	b12	b11	b10	b9	b8		
SP_DCSQ_STM [2518]									
b7	b6	b5	b4	b3	b2	b1	b0		
SP_DCSQ_STM [1710]									

FIG. 136

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Display control command (SP_DCCMD)

Common	0.11.11	- 0	
	Contents	Codes	Number of extended fields
(1)FSTA_DSP	Forcibly set pixel data display start timing	90 90	0 bytes
(2)STA_DSP	Set pixel data display start timing	01h	0 bytes
(3)STP_DSP	Set pixel data display stop timing	02h	0 bytes
(4)SET_COLOR	Set color code of pixel data	03h	8 bytes
(5)SET_CONTR	Set contrast between pixel data and main picture	04h	8 bytes
(6)SET_DAREA	Set pixel data display region	OSh	6 bytes
(7)SET_DSPXA	Set pixel data display start address	06h	8 bytes
(8)CHG_COLCON	Set change of pixel data color and contrast	07h	PCD size + 2 bytes
(9)CMD_END	End display control command	FFh	0 bytes

FIG. 137

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FSTA	_DSP								
b7	b6	b5	b4	b3	b2	b1	b0		
0	0	0	0	0	0	0	0		
F I G. 138A									
STA	DSP		1 1 4	. 100/1			•		
b7	_56	b5	b4	b3	b2	b1	b0 ·		
0	0	0	0	0	0	0	1		
		-l	FIG	138B	l	<u> </u>			
STP	DSP		ı ı G.	1300					
b7	_D31	b5	b4	b3	, b2	b1	b0		
0	0	0	0	0	0	1	0		
			EIC	138C		1.			
			riG.	1300					
_	COLOR								
b71	b70	b69	b68	b67	b66	<u>b65</u>	b64		
0	0	0	0	0	0	1	1		
b63	b62	b61	b60	b59	<u>b58</u>	b57	b56		
	Color code			····	•	of pixel 1			
b55	b54	b53	b52	b51	b50	b49	<u>b48</u>		
	Color code				Color code	of pixel 1	3		
b47	<u>b46</u>	<u>b45</u>	b44	b43	b42	b41	<u>b40</u>		
	Color code	•				of pixel 1			
b39	b38	b37	b36	b35	b34	b33	b32		
	Color code	 				of pixel 9			
<u>b31</u>	b30	b29	b28	b27	b26	b25	b24		
1.00	Color code					of pixel 7			
b23	b22	b21	b20	b19	b18	b17	b16		
L-15	Color code		110			of pixel 5			
b15	b14	b13	b12	<u>b11</u>	b10	b9			
	Color code					of pixel 3			
b7	Color code	b5	b4	b3	b2	<u>b1</u>	b0		
	Color code	ot pixel 2			Color code	of pixel 1			

F I G. 139

			SET_C	CONTR				
b71	b70	b69	b68	b67	b66	b65	b64	
0	0	0	0	0	1	0	0	
b63	b62	b61	b60	b59	b58	b57	b56	
	Contrast	of pixel 16			Contrast	of pixel 15		
b55	b54	b53	b52	b51	b50	b49	b48	
	Contrast	of pixel 14			Contrast	of pixel 13		
b47	b46	b45	b44	b43	b42	b41	b40	
	Contrast	of pixel 12			Contrast	of pixel 11	, <u>,</u> ,	
b39	b38	b37	b36	b35	b34	b33	b32	
	Contrast	of pixel 10			Contrast	of pixel 9	<u></u>	
b31	b30	b29	b28	b27	b26	b25	b24	
	Contrast	of pixel 8		Contrast of pixel 7				
b23	b22	b21	b20	b19	b18	b17	b16	
	Contrast	of pixel 6		Contrast of pixel 5				
<u>b15</u>	b14	b13	b12	b11	b10	b9	b8	
	Contrast	of pixel 4			Contrast	of pixel 3		
b7	b6	b5	b4	b3	b2	b1	b0	
	Contrast	of pixel 2		_	Contrast	of pixel 1		

FIG. 140

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SET_DAREA

b55	b54	b53	b52	b51	b50	b49	b48					
0	0	0	0	0	1	0	1					
b47	b46	b45	b44	b43	b42	b41	b40					
reserved Start X-coordinate (Upper bits)												
b39	b38	b37	b36	b35	b34	b33	b32					
5	Start X-coordinate (Lower bits) End X-coordinate (Upper bits)											
b31	b30	b29	b28	b27	b26	b25	b24					
	End X-coordinate (Lower bits)											
b23	b22	b21	b20	b19	b18	b17	b16					
rese	rved		Start	Y-coordina	ite (Upper	bits)						
b15	b14	b13	b12	b11	b10	b9	b8					
Star	Start Y-coordinate (Lower bits) 0					End Y-coordinate (Upper bits)						
b7	b6	b5	b4	b3	b2	b1	b0					
		End Y	-coordinat	End Y-coordinate (Lower bits)								

FIG. 141

	TV system									
	525/60	625/50	HDTV-1280	HDTV-1440	HDTV-1920					
X-coordinate value	0~719	0~719	0~1279	0~1439	0~1919					
Y-coordinate value	2~479	2~574	2~719	2~1079	2~1079					

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SET_DSPXA b71 b70 b69 b66 b65 b64 b68 b67 0 0 0 0 1 1 0 0 b63 b62 b59 **b**58 **b57** b61 b60 b56 Address of start pixel data for top field and/or address of plain data (Upper bits) b55 b54 b53 b52 b51 b50 b49 b48 Address of start pixel data for top field and/or address of plain data (Middle upper bits) b47 b46 b45 b44 b43 b42 b41 b40 Address of start pixel data for top field and/or address of plain data (Middle lower bits) b39 b38 b34 b32 b37 b36 b35 b33 Address of start pixel data for top field and/or address of plain data (Lower bits) b31 b30 b29 b28 b27 b26 b25 b24 Address of start pixel data for bottom field (Upper bits) and/or reserved b23 b22 b21 b20 b19 b18 b17 b16 Address of start pixel data for bottom field (Middle upper bits) and/or reserved **b**9 b15 b14 b13 b12 b11 b10 b8 Address of start pixel data for bottom field (Middle lower bits) and/or reserved b7 b3 b2 **b**6 b5 b4 b1 b0 Address of start pixel data for bottom field (Lower bits) and/or reserved

FIG. 143

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CHG_COLCON

bm	bm-1	bm-2	bm-3	bm-4	bm-5	bm-6	bm-7			
0	0	0	0	0	1	1	1			
_bm-8	bm-9	bm-10	bm-11	bm-12	bm-13	bm-14	bm-15			
			rese	rved						
bm-16	bm-17	bm-18	bm-19	bm-20	bm-21	bm-22	bm-23			
		Exten	ded field s	size (Uppe	r bits)					
bm-24	bm-25	bm-26	bm-27	bm-28	bm-29	bm-30	bm-31			
		Exten	ded field s	ize (Middl	e bits)					
bm-32	bm-33	bm-34	bm-35	bm-36	bm-37	bm-38	bm-39			
		Exten	ded field s	size (Lowe	r bits)					
bm-40	bm-41	bm-42	bm-43	bm-44	bm-45	bm-46	bm-47			
	Pixel control data PXCD (start)									
b7	b6	b5	b4	b3	b2	b1	b0			
		Pixel	control da	ta PXCD	(end)					

FIG. 144

CMD_END

b7	b6	b5	b4	b3	b2	b1	b0
1	1	1	1	1	1	1	1

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PXCD	CD Desc			
	Contents	Number of bytes		
LN_CTLI #1 PX_CTLI #1 :	Line control information #1 Pixel control information #1 :	4 bytes 18 bytes :		
PX_CTLI #i	Pixel control information #i	18 bytes		
LN_CTLI #2 PX_CTLI #1 :	Line control information #2 Pixel control information #1 :	4 bytes 18 bytes		
PX_CTLI#j	Pixel control information #j	18 bytes		
:		:		
LN_CTLI #n-1 PX_CTLI #1 : PX_CTLI #k	Line control information #n-1 Pixel control information #1 : Pixel control information #k	4 bytes 18 bytes : 18 bytes		
LN_CTLI #n	Line control information #n (end code) 4 bytes			

FIG. 146

LN_CTLI

		•		_			
<u>b31</u>	b30	b29	b28	b27	b26	b25	b24
reserved					Start-d	of-change line (Upper bits)	
b23	b22	b21	b20	b19	b18	b17	b16
	Start-of-change line number (Lower bits)						
b15	b14	b13	b12	b11	b10	b9	b8
	Number of change points			reserved	Number	of end-of-ch (Upper bits)	
b7	b6	b5	b4	b3	b2	b1	b0
	Number of end-of-change lines (lower bits)						

FIG. 147

	TV system				
	525/60	625/50	HDTV-1280	HDTV-1440	HDTV-1920
Line number	2~479	2~574	2~719	2~1079	2~1079

FIG. 148

			РХ	CTLI			
b143	b142	b141	b140	b139	b138	b13	7 b136
		reserved			Start-of	-change (Upper	pixel number
h125	h124	L 100	h100	h 101	<u> </u>		<u>-</u>
b135	b134	b133		b131			9 b128
	1.100		hange pixe				
b127		b125	b124	b123		b12	
	Contrast o				Color code		<u> </u>
b119		b117		b115		b113	
	Contrast o			<u> </u>	Color code		· ···
b111	b110		b108_	<u>b107</u>			
	Contrast o	f new pixe	114	•	Color code	of new	pixel 14
b103	b102	b101	b100	b99_	b98	b97	b96
	Contrast o	f new pixe	el 13	•	Color code	of new	pixel 13
b95	b94	b93	b92	b91	b90	b89	b88
	Contrast o	f new pixe	12	(Color code	of new	pixel 12
b87	b86	b85	b84	b83	b82	b81	b80
	Contrast of	f new pixe	111	(Color code	of new	pixel 11
b79	b78	b77	b76	b75	b74	b73	b72
	Contrast of	f new pixe	10	(Color code	of new	pixel 10
b71	b70	b69	b68	b67	b66	b65	b64
	Contrast of	of new pixe	el 9		Color code	of new	pixel 9
b63	b62	b61	b60	b59	b58	b57	b56
	Contrast o	of new pixe	el 8		Color code	of new	pixel 8
b55	b54	b53	b52	b51	b50	b49	b48
	Contrast o	of new pixe	el 7		Color code	of new	pixel 7
b47	b46	b45	b44	b43	b42	b41	b40
	Contrast of	f new pixe	el 6		Color code	of new	pixel 6
b39	b38	b37	b36	b35	b34	b33	b32
	Contrast o	of new pixe	el 5	***	Color code	of new	pixel 5
b31	b30	b29	b28	b27	b26	b25	b24
	Contrast o	of new pixe		A	Color code	of new	
b23	b22	b21	b20	b19	b18	b17	
		f new pixe			Color code		
b15	b14	b13	b12	b11	b10	b9	b8
	Contrast o				Color code		
b7	b6	b5	b4	b3	b2	b1	. b0
	Contrast o				Color code		
		pixt	•			2	F. 1. 101. 1

FIG. 149

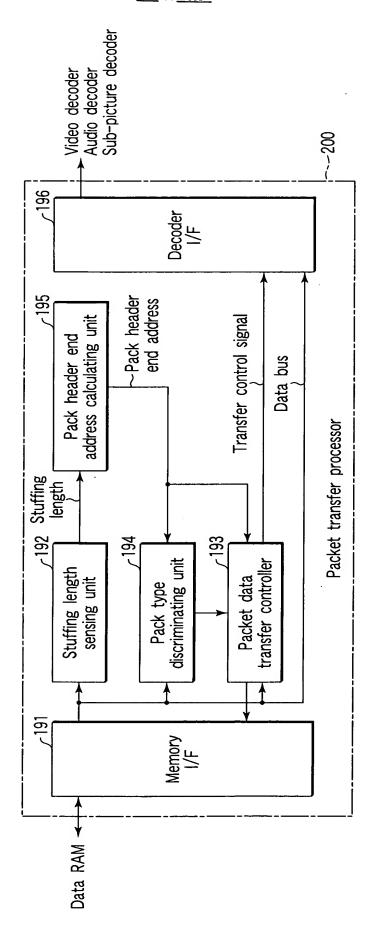
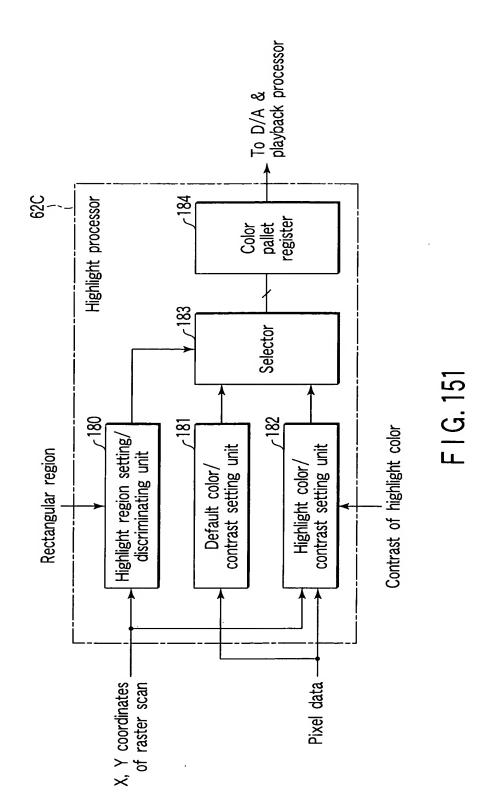
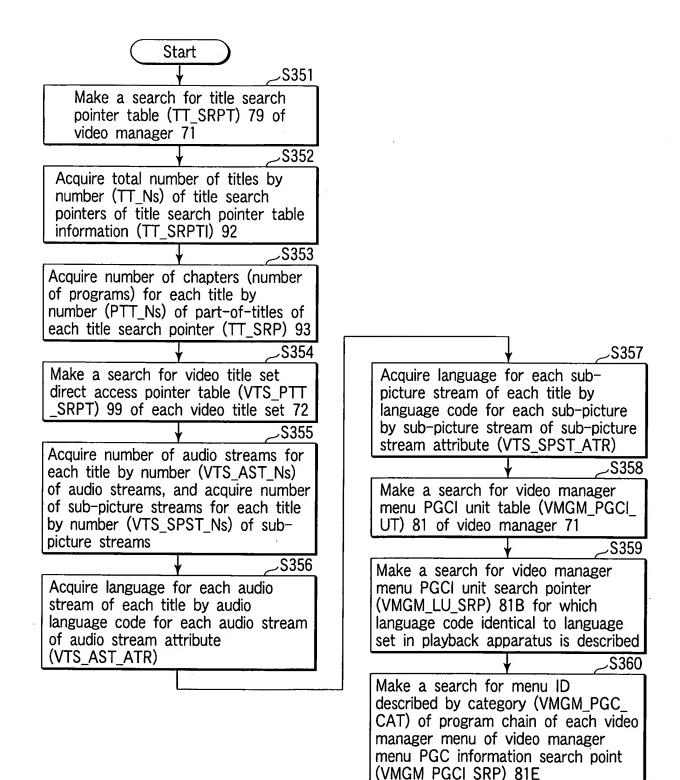
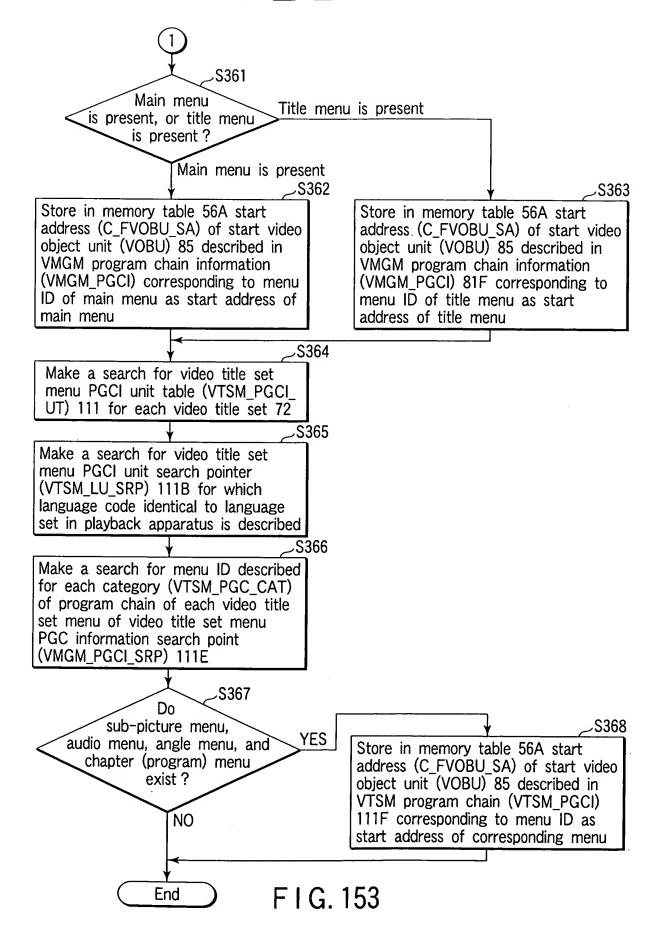


FIG. 150





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Start address of start video object unit

VIGCO OBJECT UNIT			
C_FVOBU_SA of VOBU described in VMGM_PGCI			
C_FVOBU_SA of VOBU described in VMGM_PGCI			
C_FVOBU_SA of VOBU described in VTSM_PGCI			
C_FVOBU_SA of VOBU described in VTSM_PGCI			
C_FVOBU_SA of VOBU described in VTSM_PGCI			
C_FVOBU_SA of VOBU described in VTSM_PGCI			
C_FVOBU_SA of VOBU described in VTSM_PGCI			
C_FVOBU_SA of VOBU described in VTSM_PGCI			
C_FVOBU_SA of VOBU described in VTSM_PGCI			
C_FVOBU_SA of VOBU described in VTSM_PGCI			

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4 SUB-PICTURE
5 ANGLE
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6 LANGUAGE

FIG. 155

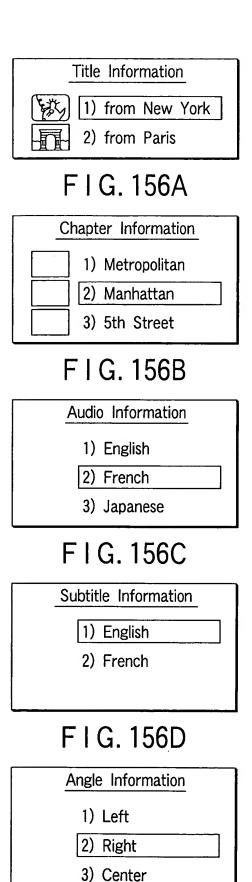
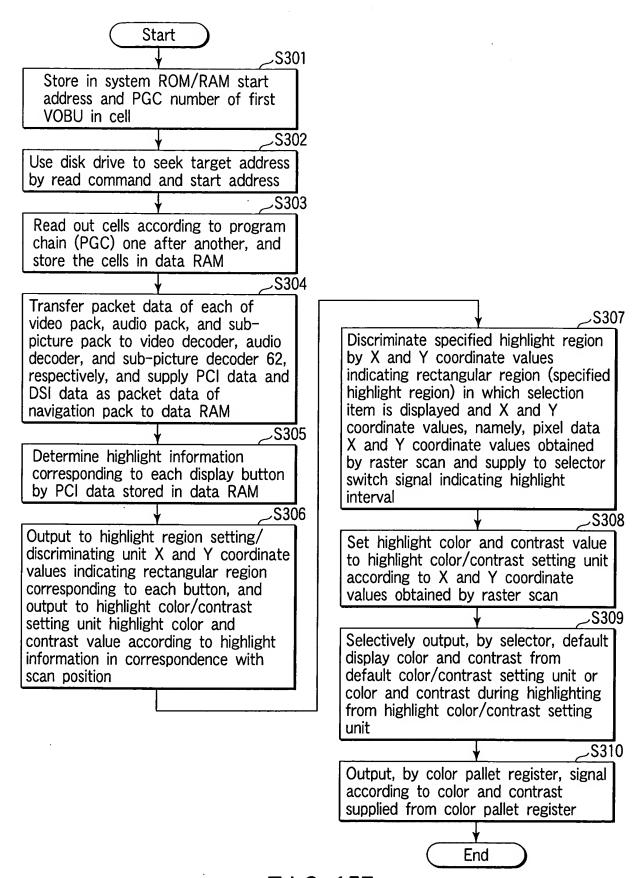
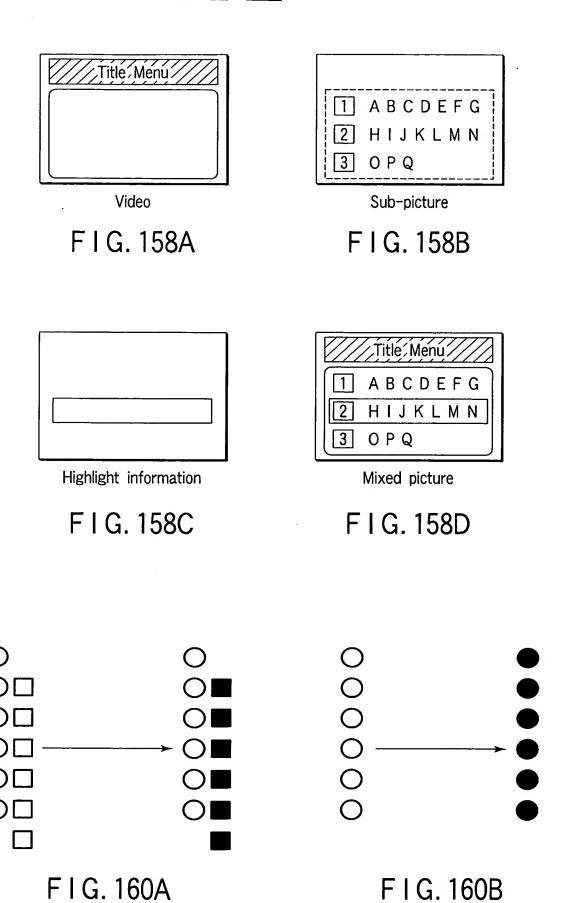
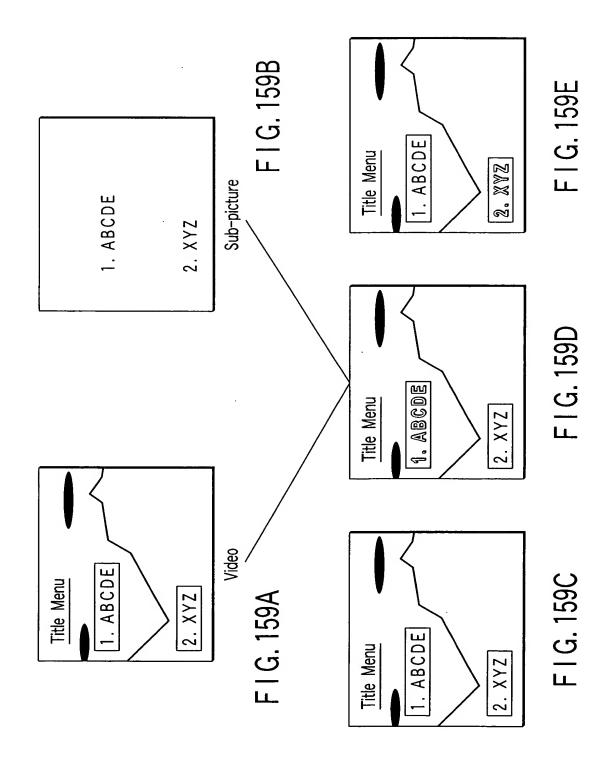


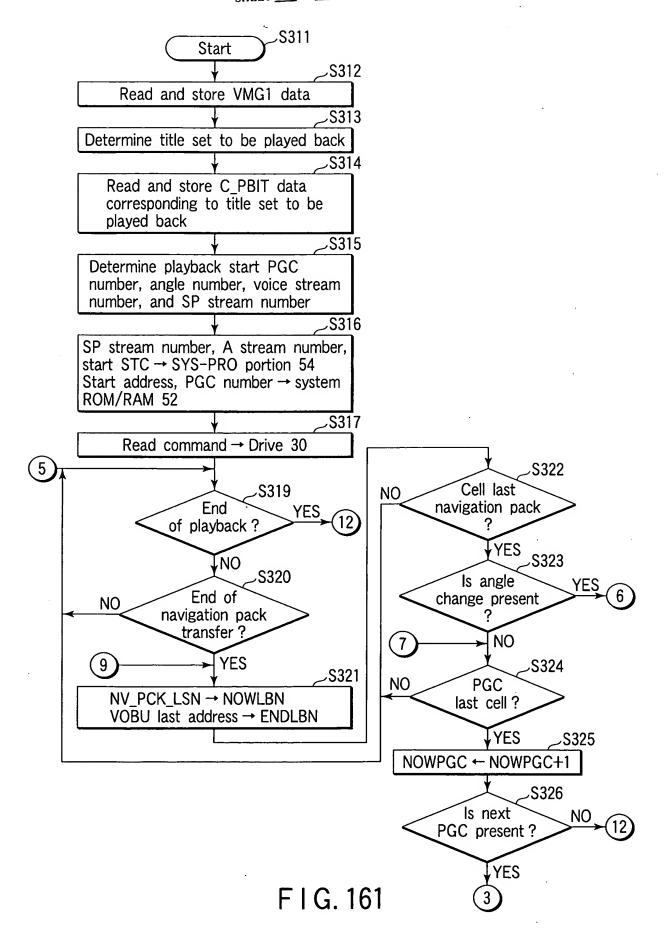
FIG. 156E



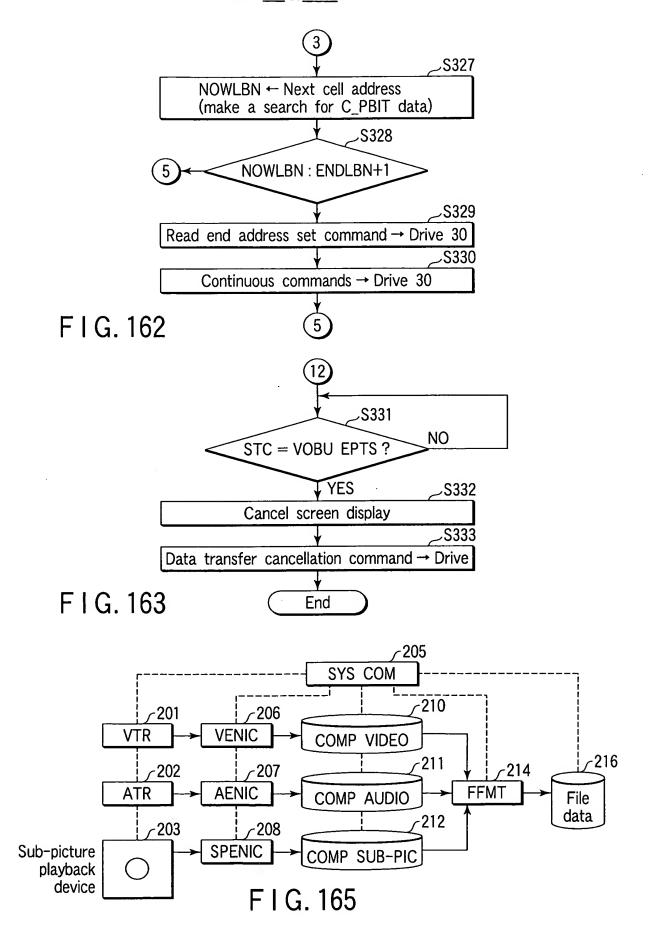




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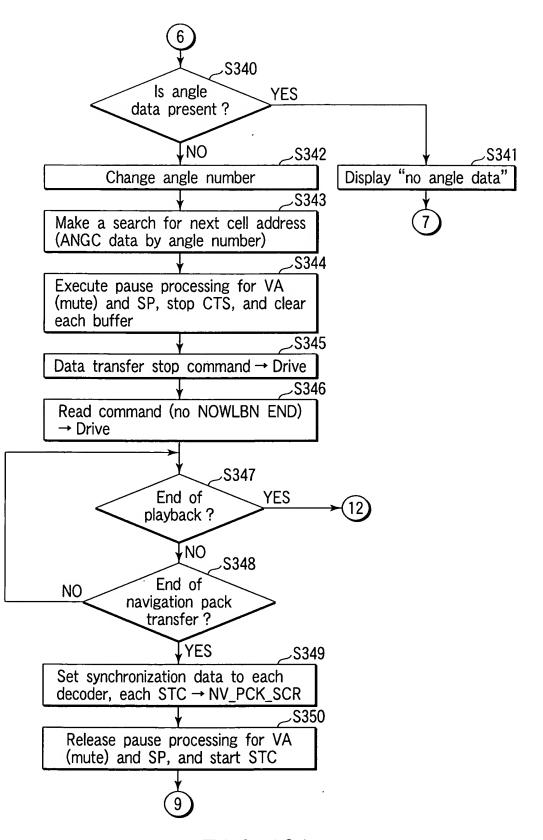


FIG. 164

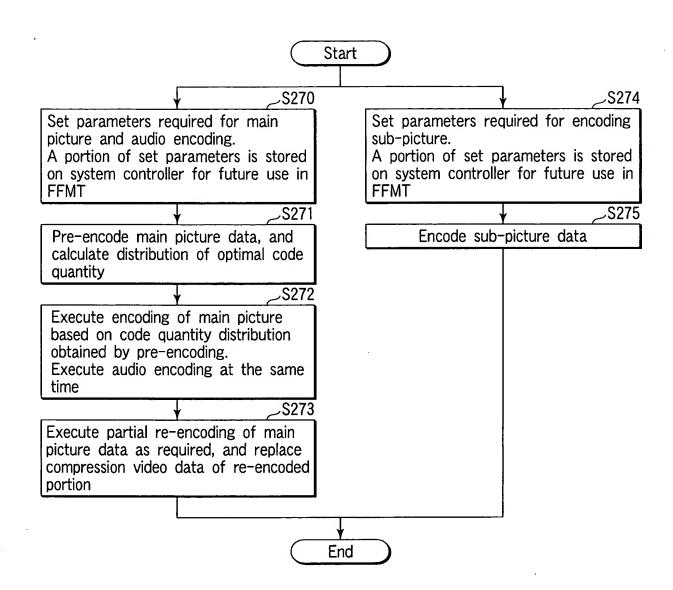
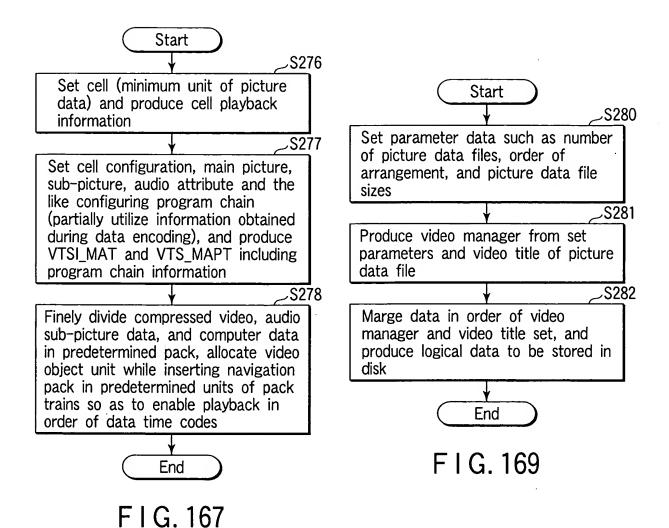


FIG. 166



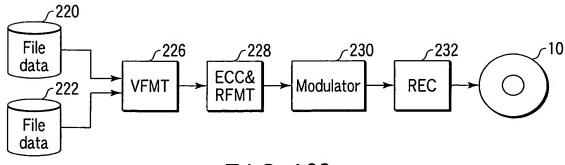
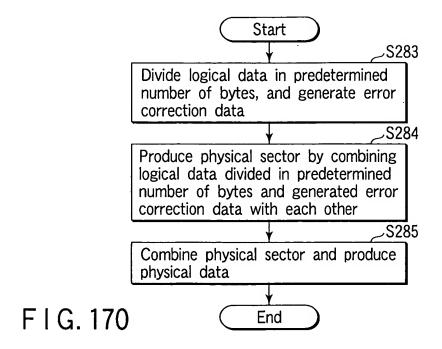
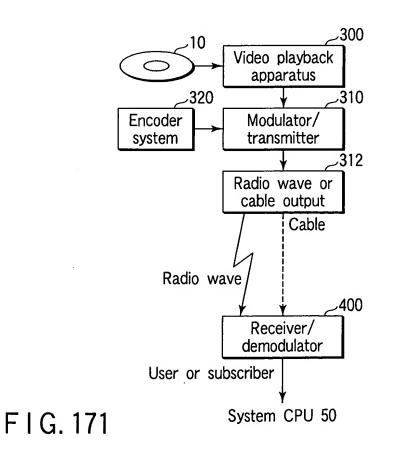


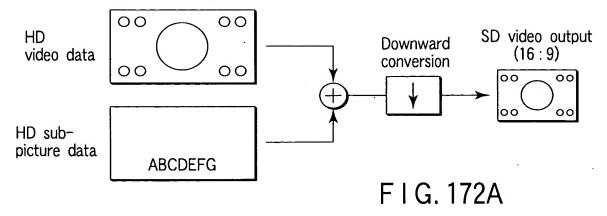
FIG. 168

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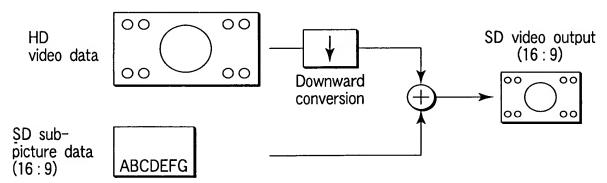




Downward conversion after data mixing



Downward conversion before data mixing



F I G. 172B

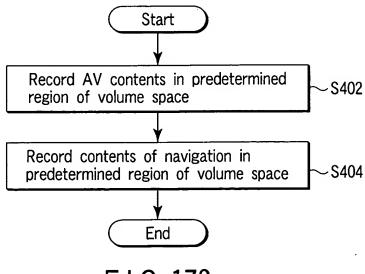


FIG. 173